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Amateur Radio

Volume 76
Numbers 1 & 2

JANUARY &
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Editor's Note:

Due to an unprecedented demand for space in this issue of *Amateur Radio*, a number of articles, including the annual *Amateur Radio 2007 Index*, some *Over to you* letters and *Silent key* obituaries have been held over, and will be published in the March issue of *Amateur Radio*.

We apologise for any inconvenience this may have caused, especially to those who have been waiting to see their contributions published. These will be included in the magazine in the very near future.

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Our Cover this month

The IC-2820H dual band FM transceiver, fitted with the optional board for D-STAR operation and GPS reception. See the review on page 14. Photo by Peter Freeman VK3KAI.

Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiments, experiences opinions and news. Manuscripts with drawings and/or photos are always welcome and will be considered for publication. Articles on disc or email are especially welcome. The WIA cannot be responsible for loss or damage to any material. A pamphlet, 'How to write for Amateur Radio' is available from the National Office on receipt of a stamped self-addressed envelope.

Back Issues

Back issues are available directly from the WIA National Office (until stocks are exhausted), at $8.00 each (including postage within Australia) to members.

Photostat copies

When back issues are no longer available, photocopies of articles are available to members at $2.50 each (plus an additional $2 for each additional issue in which the article appears).

Disclaimer

The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

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Editorial Comment

Peter Freeman VK3KAI

Welcome to the 2008 year

I trust that your festive season has been productive and renewing. This is often one of the regular times at which we make the effort to create an occasion to spend time with our extended family. The New Year has begun. So too, it seems, has the next sunspot cycle, according to the expert solar observers. This means that propagation on the prime HF bands will soon begin to improve, delivering many of those DX stations with a little less stress.

It is interesting how the ionosphere behaves. Many aspects are reasonably well understood – we can see this from the various ionospheric prediction services that are readily available via the internet, allowing those interested to anticipate when they may be able to work that DXpedition to the new country or the rare IOTA. On the other hand, there are many aspects that still evade a simple explanation. Examples of the unpredictable aspects of ionospheric behaviour have been readily observed on the six and two metre amateur bands over the last couple of months: just read the reports of the Es events in this month's VHF/UHF column, documenting just some of the long distance contacts via Es on both 50 and 144 MHz. Among the more notable contacts must be the contact from VK5 to ZL via Es - well done Brian.

As we have moved into the typical summer weather patterns, we have also seen examples of enhanced tropospheric propagation. Several openings on 2 m and 70 cm have been observed from the south-west corner of Western Australia across to South Australia, Victoria and Tasmania, and from ZL to VK2 and VK4. At times, it was frustrating to look at the reports on the vk-logger of stations being heard and worked from Melbourne, only to hear nothing in the Latrobe Valley, some 160 km further east. Perseverance does sometimes pay – I did manage to work some new squares and even into VK6 on one occasion on two metres.

Due to work and family commitments, I missed participating in two of my favourite contests: the Spring and Summer VHF/UHF Field Day contests. I did not miss out entirely for the Summer event, as I did manage a few contacts. I hope that all who did participate in the summer contest made the effort to submit logs!

VK4 news column

Due to the lack of support from the mainly southern AR clubs in the state, Ross VK4AQ has decided not to continue as coordinator of the VK4 News Column. Ross thanks the couple of southern contributors who did make the effort to send information.

On behalf of the Publications Committee, I thank Ross for his work over the past months.

Drafting skills

Do you have both an understanding of electronic schematics and drafting skills? Familiar with the use of a good quality CAD package? The Publications Committee has been largely relying on one person to assist in the preparation of technical drawings to the stage that they are suitable for publication. We can publish some schematics as supplied, when prepared in some software packages. Others require redrafting, either because the drawings are not of sufficient quality or because the drawings do not have sufficient resolution to allow reliable reproduction in print. We are looking for someone to assist our current draftsperson, Bill Roper VK3BR, with the drafting tasks. Bill is willing to help anyone interested in developing the skills needed to ensure that we can continue to present quality drawings in our magazine.

Amateur licence conditions and other matters

As you will see in the WIA News column, it is highly likely that the ACMA will soon make announcements regarding several issues regarding amateur radio: the revised LCD, outsourcing of some aspects of administration of callsigns and the introduction of a Class Licence for visiting amateurs. Watch out for news of the outcomes of these considerations via the WIA News broadcast and the WIA website. All going well, we expect to have the key details in the next edition of AR.

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Michael Owen VK3KI

The WIA, the advocate for the amateurs

This issue of Amateur Radio includes a paper by Keith Malcolm VK1ZKM, "WRC and Amateur Radio".

Keith describes the way an ITU World Radiocommunications Conference works, including the preparatory work and the other groups that influence the outcome. He also reports on the outcomes of the last WRC, WRC – 07 so far as the amateur service is concerned.

Please read what Keith has written.

While Keith does stress the ongoing nature of the work of the ITU and does identify the various organisations and groups that participate in that work, we need to remember the extent of the ongoing commitment of amateur organisations and individual amateurs that this process requires.

A couple of weeks ago I was writing a piece for the IARU Region 3 Newsletter and as I did so I thought about the extent of the commitment by so many in so many places, I began to wonder whether many of us really appreciated it.

Did we really understand the importance of the WIA in all of this?

As I have so often said, it is this advocacy role that is for me the ultimate reason for the WIA, and the reason why all amateurs should be WIA members. Yet we, as directors of the WIA, often have reservations about relying too strongly on that advocacy role when we are promoting the WIA. We fear it is all too remote and esoteric to attract members, rather we feel that we need to point to more direct benefits, such as the QSL service and the like.

The amateur service promotes and protects its interests at three levels - at the global level through the International Amateur Radio Union (IARU), primarily to the ITU, at a regional level through the three IARU regional organisations, which in our Region is IARU Region 3, and at a national level through the national radio societies, which in Australia is the WIA.

As Keith points out, as one WRC ends work on the next WRC starts. At a national level, since WRC-03, the WIA has participated in the Australian preparatory work for the WRC just ended, primarily through two highly qualified and experienced representatives, Keith Malcolm and David Wardlaw.

And Keith was a member of the Australian delegations to WRC-03 and WRC-07, nominated and paid for by the WIA.

The IARU, the federation of national radio societies, including the WIA, primarily funded by the ARRL, is the amateur peak organisation and, as Keith says, a sector member of the ITU.

The IARU has a continuing involvement in the ITU preparatory work for a WRC, starting right from the conclusion of the previous conference. A small number of highly qualified people participate in the Conference Preparatory Meeting and the various ITU-R Study Groups, representing the IARU. The IARU has already participated in the first CPM for WRC-11.

The IARU does not only participate in work relating to agenda items that raise an amateur matter, but many other agenda items that could have consequential effects on the amateur service.

But as Keith also points out, the regional or sub regional groupings of countries are of growing importance. In our Region, it is the Asia-Pacific Telecommunity (the "APT") that in recent years has become an important block of votes.

The IARU has three regional organisations covering the same areas as the ITU Regions. The IARU regional organisation is responsible for representing the amateur service the best way it can before its regional or sub-regional groups of countries.

The WIA is a member of the IARU Region 3 organisation, paying an annual subscription in respect of each WIA member.

In Region 3 the APT has already started to convene meetings for the next WRC in 2011.

IARU Region 3 has participated in the APT meetings that were preparatory for the WRC last year. In fact, there were two such meetings in 2007, both in Bangkok.

IARU Region 3 also participated in specialist regional meetings, such as the ABU Preparatory Seminar in Malaysia in June 2007.

The competition for spectrum is very real, and the amateur service cannot rely on governments and commercial organisations to protect its interest unless it advances its case and participates at a technical level in the process that results in the decisions of a WRC.

That involves a number of skilled people in a number of countries. It involves organisations such as the IARU and its Regional organisations. Those organisations in turn depend on national radio societies such as the WIA.

But, as Keith points out, at a WRC it is critical that amateur specialists are members of national delegations. That again depends on the national radio society.

The WIA was not the only national radio society to provide an amateur expert to its national delegation. At WRC-07, NZART was represented by Peter Lake, and JARL was represented by Jay Oka. Joong-Geun Rhee was a member of the Korean delegation. In other Regions a number of other societies also had a member on their national delegation as the amateur expert. These included the delegations for the Netherlands, Canada, Norway, the United Kingdom and the USA, as well as the African Telecommunications Union.

The WIA is a member of IARU Region 3, pays an annual subscription and participates in its triennial conferences.

Region 3 participates in the Administrative Council of the IARU, the peak policy body of the IARU.

The WIA participates at a national level in the Australian preparation for a WRC and is part of the Australian participation in a WRC.

So, every member's subscription to the WIA allows the WIA to play a vital role nationally, and contributes to the IARU regional organisation that represents us at a regional level, and a very small part of that regional subscription is passed on to the IARU, which represents us at a global level.

WIA News

2008 AGM announced

The WIA Board has announced that Broken Hill will be the location of the next AGM and associated activities.

The AGM last year at Parkes, built around the "Dish", was a great success, and the Board's aim is to make this year even better.

The "feedback" from last year made it clear that an interesting location away from a capital city was attractive to many members. Broken Hill offers better facilities with a greater capacity for participation. Broken Hill also has a history associated with radio, as a Royal Flying Doctor base and home of the School of the Air.

Because of other activities in Broken Hill earlier in May, the AGM will be a couple of weeks later than recent years, so keep aside the weekend of 24/25 May 2008 for Broken Hill and the WIA AGM.

Full details of this exciting event will be published soon.

New WIA Secretary

Following the sudden death of Chris Jones VK2ZDD in August 2006 Ken Fuller VK4KF almost immediately took over the position that Chris held as secretary of the WIA, on a purely temporary basis.

In fact, Ken has made an enormous contribution to the WIA, providing assistance in many areas including the restructuring of the National Technical Advisory Committee and tracking all the tasks to be completed.

WIA President Michael Owen VK3KI on behalf of the Board thanked Ken for his contribution to the WIA and his willingness to complete so many tasks initially undertaken as very short term solutions to an immediate problem.

Ken will formally retire as WIA Secretary on 5 February 2008.

The Board has appointed Geoff Atkinson VK3YFA as the new secretary.

Geoff has a technical background coupled with conducting a successful importation business in recent years.

ACMA to consider amateur outsourcing

A number of amateurs drew the WIA's attention to the ACMA's request for Expressions of Interest in providing certain functions for the amateur service, including the management of amateur examinations, the issue of certificates of proficiency and certain administrative functions in relation to callsigns.

The ACMA request required all Expressions of Interest to be lodged by 8 November, as was done by the WIA, and the Indicative Timing published by the ACMA in its Request indicated that the successful party lodging an Expression of Interest, as well as the unsuccessful parties, would be advised in December.

A number of members have asked the WIA whether its lodgement of an Expression of Interest was successful.

The WIA has been advised that because of other pressures the Authority will now consider the Expressions of Interest at its meeting on 7 February 2008 (previously advised as 24 January 2008).

It is likely that the ACMA Board will also consider at the same time the Determination to amend the Amateur LCD to give effect to the remaining matters identified in the ACA's Outcomes to its inquiry in the regulation of the amateur service as well as the Class Licence for visiting amateurs, a further step toward participating in the CEPT scheme for visiting amateurs.

The WIA will advise amateurs immediately it hears the result of the Authority's decisions.

Clubs interested in becoming D-STAR Clubs

Recently Icom Australia and the WIA, concurrently with the official opening of the Olinda D-STAR repeater VK3RWN, announced the gift by Icom of five further D-STAR repeaters to the WIA so that a D-STAR repeater will be able to serve each of the other state capitals.

When announcing the gift, the WIA said that it will consult with people in each state capital including the appropriate Advisory Committee to identify a club or group of clubs, supported by people with the necessary RF and computer skills, able to provide a suitable site and supply the ancillary equipment.

Two Clubs have expressed interest in serving the Sydney area as the WIA D-STAR Club, and before making a decision, the WIA invites any other club also interested in becoming the WIA D-STAR club to serve either Sydney or Brisbane to contact the Secretary.

The WIA has identified certain criteria which it considers important for the selection process, and asks interested clubs to supply as much information as possible as specified on the release published on the WIA website.

New look WIA website

Unless something unforeseen has happened, by the time this issue of AR has been distributed the new, up-dated WIA website (http://www.wia.org.au) will be online.

WIA director Robert Broomhead VK3KRB has been the driving force behind a much more modern looking, much more user-friendly website, and one where it is much easier to find what you need.

Many, many other people have contributed to the new site, providing new material and up-dating old material.

The WIA Board acknowledges their contribution.

Each affiliated club has been assigned a page on the new website so the club can provide club details and promote club activities. Each club secretary will be contacted and given login details so that the club's page can be up-dated.

Parts of the site may still be under construction, and will be marked as such.

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WRC and amateur radio

Keith Malcolm VK1ZKM

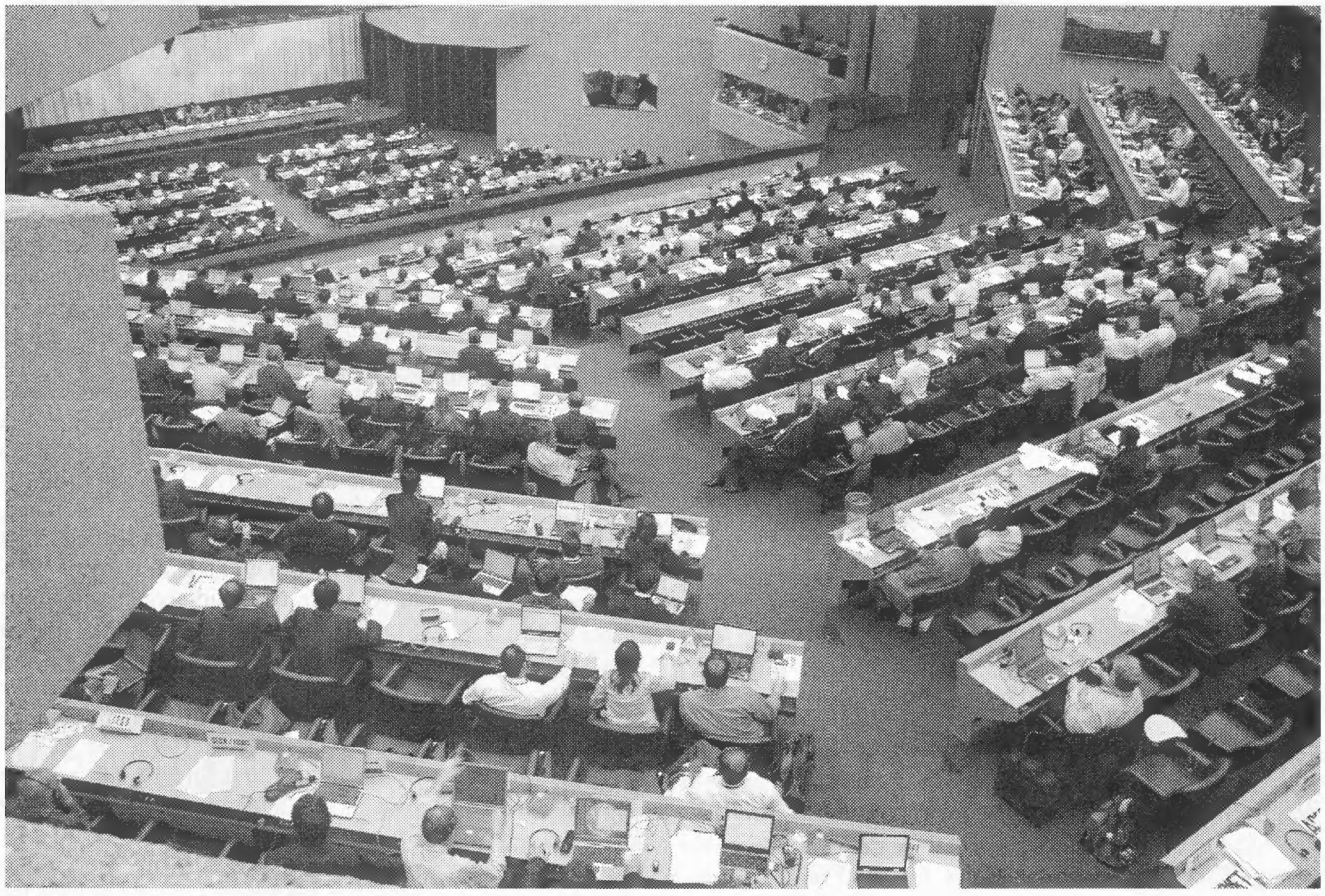
This paper outlines the relationship between World Radiocommunications Conferences (WRCs) and the Amateur Radio services and tells why participation in WRCs is important.

The hobby of amateur radio is controlled by national regulations (in Australia, by regulations administered by the Australian Communications and Media Authority (ACMA)) that are generally derived from the Radio Regulations of the International Telecommunications Union (ITU). These Radio Regulations are wide-ranging and form the basis for the international agreement regarding the management and use of the radio frequency spectrum for communications purposes. This agreement between the administrations (countries) that are the formal Members of the ITU is formalised through the Final Acts of the WRCs that are held from time to time. As such, the Radio Regulations have the status of a government to government treaty.

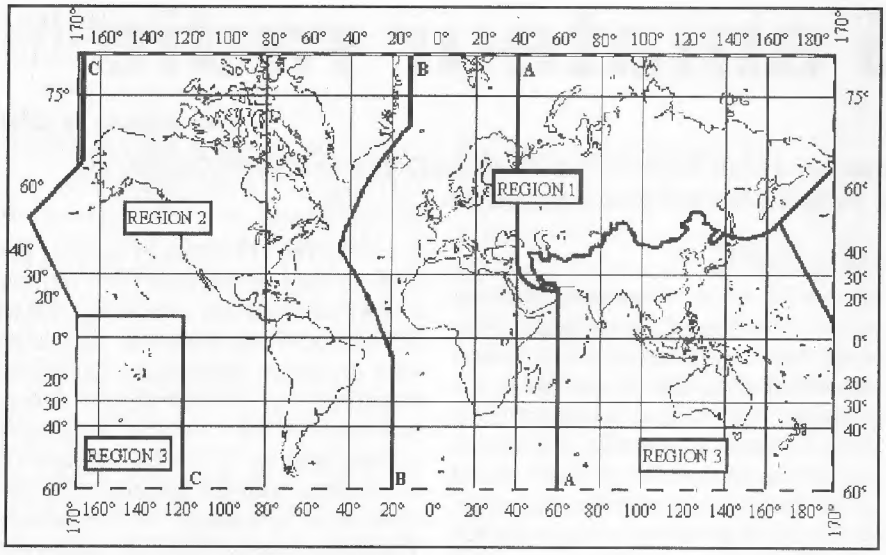
The WRC

The WRC is an autonomous activity of the ITU (as befits its status as a treaty-level conference), but it is also associated with, and dependent on, the ongoing ITU Radiocommunications (ITU-R) study programme. The formal conclusion of each ITU-R study period is the Radiocommunication Assembly (RA) and it is convenient for the RA and WRC to be held in association with each other – with the RA occurring in the week preceding the WRC.

A WRC is a huge undertaking – WRC-07 was attended by more than 2800 delegates representing the interests of 164 of the 191 Member States that form the ITU. Holding a WRC is an expensive business for both the participants and for the ITU. The ITU costs of running the WRC-07 are in excess of 5.7 million Swiss Francs. Of this amount, more than 3.3 million Swiss Francs is associated with document preparation (including translation of 11,800 pages of text into each of the 6 official languages and the printing of 9 million pages of documents) with the balance being the direct costs of running the Conference. The majority of delegates actually work with electronic versions of documents rather than paper copies, so this helps to keep the printing costs under some sort of control. For participants, the costs of attendance include travel and the need to live in Geneva for the four weeks of the Conference. The photographs gives some impression of the scale of a WRC.



A birds-eye view of a plenary meeting



ITU_Regions: World map showing ITU Regions (Courtesy ITU)

A WRC has many agenda items to deal with (WRC-07 had 28 separate agenda items and sub-items), so has to adopt a "layered" approach to get the work done in the available time. The top layer, and final decision making element is the Plenary meeting of the Conference. The Plenary is the full meeting with all participants attending. The next level of the conference structure consists of a number of Committees which each deal with a broad range of related tasks. Committees then subdivide the task into Working Groups which, in turn, divide into Sub-Working Groups. Each Sub-Working Group (SWG) deals only with a single agenda item. The SWGs are the lowest formal layer in the structure. A SWG may form as many ad-hoc drafting groups as necessary to resolve its agenda item. A drafting group (DG) might deal with an issue as small as a single word or phrase in the event that an issue is particularly contentious.

The SWG and DG meetings are the places where the major part of the work is undertaken and the WRC outcomes are prepared. Unlike the higher-level meetings, which are scheduled such that only one or two meetings occur in parallel, there is little restriction on the timing of SWG and (especially) DG meetings and many SWG or DG meetings may occur at the same time. The Geneva Conference Centre provides about 20 meeting rooms and the ITU also has a number of separate meeting rooms of its own, so the potential for large numbers of simultaneous working-level meetings is high. In addition, the low-level groups may hold only a small number of meetings before completing their task. This means that decisions to support or oppose proposed outcomes have to be made by delegates on the spot with little opportunity to consult stakeholders at home. For these reasons it is very valuable to have an expert participant at the conference as a part of the national delegation.

The ITU is an inter-governmental agency and has two groups of participants. One group is the administrations that are signatories to the ITU Constitution and Convention and the second group comprises commercial, scientific and international organisations that are associated with radiocommunications. The International Amateur Radio Union (IARU) is one of these second groups of participants that are known collectively as "sector members" to distinguish them from the administrations. The difference between the two groups is of significance only at a WRC – because the WRC is an inter-governmental treaty meeting, the sector members have only observer status and can submit only information papers to the WRC. Similarly, while sector members are entitled to attend meetings of the WRC, they can speak only if invited to do so by the meeting chair-person. By comparison, the delegations of administrations are entitled to submit proposals for the conference outcomes and also have a right to speak in meetings. For this reason, it is important to have amateur operators as members of administration delegations to ensure that amateur interests are fully presented to the WRC. In this context, the IARU attends the WRC to provide information and assistance to delegates to present the amateur case and to coordinate positions on issues affecting the amateur service.

Preparation for and Participation in a WRC

Preparation for a WRC commences immediately following the conclusion of the preceding WRC, with the establishment of a Conference Preparatory Meeting (CPM). The task of the CPM includes the identification of issues needing to be considered so as to address the formal agenda items of the Conference. This includes the identification and assignment of tasks to ITU-R Study Groups. The CPM then gathers the results of the studies to compile its report to the WRC. This report forms the technical bases for the WRC and is effectively the "agreed facts" that apply to each agenda item.

The ITU is formed of the administrations that are the member states and all of its work is driven by contributions and proposals from the member states. Accordingly, any entity wishing to achieve an outcome at a WRC must make appropriate contributions to the work. This is most easily achieved through the meetings of ITU-R Study Groups, but can also be achieved by direct contributions to the CPM and to the WRC. A major difference is that only administrations can make contributions direct to a WRC, whereas all participants (including the IARU) can directly contribute to Study Group activities.

Australia, like many other countries, sets up preparatory arrangements that "mirror" the ITU-R activities. We have Australian Radiocommunications Study Groups (ARSGs) that match the ITU-R Study Group structure and we also have a WRC Preparatory Group to develop Australian positions and proposals to the WRC as well as compile the briefing document for participants attending the WRC. These processes are managed by the ACMA and the ACMA is currently working to establish the various groups needed for

the coming study period and preparation for WRC-11. The WIA takes part in the Australian preparatory work and also contributes to the IARU preparatory work at the regional level. The WIA is an active participant in the work of the ARSG that handles amateur radio matters – resulting from the new ITU-R structure this will be ARSG-5, and also takes a lower level role in other ARSGs that have potential impact on the amateur service (including ARSG-1 dealing with spectrum management methods and techniques, and ARSG-6 which deals with broadcasting services).

The ITU divides the world into 3 regions and reference to the Radio Regulations will reveal that spectrum usage is quite often different in the three regions. A map showing the regions is attached. Australia is in Region 3 along with the other Asian and western-Pacific-rim countries. A recent development in ITU working has been the emergence and strengthening of regional or sub-regional groupings of countries. Such grouping is of particular benefit to smaller countries, but may also reflect other common interests such as multi-lateral cross-border frequency coordination needs. Australia is a member of the Asia-Pacific Telecommunity (APT) regional group and attempts to align Australian and regional views and contributions to study groups and WRCs. This sometimes means modifying preferred positions for the sake of reaching a regional agreement.

The ITU has 6 official languages (English, French, Spanish, Russian, Chinese and Arabic) and WRCs are conducted in all six languages. However, study groups and their working parties usually operate only in English. This situation puts countries such as Australia and New Zealand in a special, and sometimes difficult, position within our region. There is often an expectation that an English-speaking country will lead the regional position and there are times when this expectation can lead to problems if the preferred position is not the same as the common regional view. For this reason, it is also essential that the WIA is an active participant in the IARU preparatory work because this provides an alternative path to getting amateur service views into the ITU-R texts and, via the CPM Report, into the WRC documents.

Junior members of Australian delegation (centre of picture) in plenary meeting

A WRC achieves its outcomes through a consensus process which means that input contributions from administrations and regional groups are only starting points. In many cases, it is necessary for administrations and groups to adjust their positions and views as the conference work proceeds. One objective of the delegation brief document is to provide guidance to the delegates if the position on an agenda item needs to change during the conference. It is unlikely that the brief can cover all possible contingencies, so the best outcome can be achieved if a specialist representing the interests of each group (in our case the WIA and the amateur service) attends the WRC and is able to take part in the relevant working and drafting groups.

WRC-07 Outcomes

The outcomes from WRC-07 represent a mixed bag for the amateur service which, in some ways, reflects the effects of the working of a WRC.

The claim for an amateur service LF allocation was the sole subject of WRC Agenda Item 1.15 and represented the completion of an activity that commenced at WRC-03. Over the intervening four-year period, the IARU and national societies worked through the ITU-R study group process and through national and regional WRC preparatory activities to develop a technically sound basis for the proposal and to establish a broad swell of support for the proposed allocation. This support was world-wide, and, although there were some differences in detail in the actual proposals submitted by administrations, at WRC-07 agreement to approve the new band was readily achieved.

There were two other amateur radio issues considered by WRC-07 – the further alignment of the 40-metre amateur band across the world and a claim for a 5 MHz band allocation. These objectives were included as a part of the proposals responding to WRC Agenda Item 1.13, but, unfortunately, were not achieved at WRC-07. Dave Sumner K1ZZ (IARU Secretary and ARRL CEO) has provided a succinct and concise commentary on these items in his editorial in January 2008 QST magazine. I can do no better than to quote Dave's words:

"The slight opportunity (and risk) was offered by another WRC-07 agenda item, a very complex one involving an unsatisfied requirement for additional HF broadcasting allocations between 4 and 10 MHz. The only amateur band in this frequency range is 7 MHz, and 7.0-7.2 MHz – having been dealt with at WRC-03 – was not up for discussion. However, 7.2-7.3 MHz was fair game, being an amateur allocation only in Region 2 and a broadcasting allocation elsewhere. During WRC-07 preparations the IARU successfully sought support for retention of the Region 2 allocation but was unable to identify any support for a further expansion of the amateur allocation in

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Regions 1 and 3. On the other hand, some administrations were receptive to an amateur allocation in the vicinity of 5 MHz. This was studied in ITU-R as a way of increasing the reliability of amateur emergency and disaster relief communications. Unfortunately, while the issue was kept alive by our European supporters until the very end of the 4-10 MHz discussions, support for an amateur allocation ultimately fell short – especially after the broadcasters were unable to achieve any improvement in their allocations."

These unachieved objectives do not appear on either the provisional agenda for WRC-11 or the draft agenda for WRC-15 so the first task for the IARU and national societies is to work for the inclusion of these topics on the agenda of a future conference. David Wardlaw VK3ADW has noted that the proposal for an amateur LF allocation first emerged during the preparations for WARC-79, so there is some precedent for adopting a softly-softly, long-term approach to resolution of both the 5 MHz and 40-metre band issues.

Conclusion

So ended WRC-07 as far as the amateur service is concerned. However, completion of one conference merely signals the commencement of preparations for the next WRC. We can expect that the ACMA will commence the preparatory work early in 2008 and the WIA will be looking for interested members to join the preparatory work.

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Keith Malcolm is a professional radio engineer and has represented the WIA with David Wardlaw VK3ADW at the preparatory meetings and then attended the WRC 07 as the amateur radio specialist on the Australian delegation nominated by the WIA and at the expense of the WIA. Keith previously attended WRC 03 on behalf of the WIA and in his former employment attended a number of WARCs and many ITU-R study group meetings over the period since 1984.

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Transverter controller

Dale Hughes VK1DSH.

This article describes a 28 MHz to 432 MHz transverter which uses an FT-7 HF transceiver, commercial (Hamtronics) transverter modules, a commercial (Mini-Kits) 432 MHz power amplifier and a home made control system. The emphasis is on the control system, as it can be used to control transverters using other hardware and systems that operate on different frequencies.

The advantage of using a transverter is that it can be tailored to a particular band, transmission mode or other operating preference. A well designed transverter can frequently out-perform commercial transceivers, and a single transceiver can be used to cover multiple bands that are well outside the range of the actual transceiver. Another advantage is that it may be considerably cheaper to build a transverter than to purchase a commercial transceiver for a particular band, especially if it is possible to use an older transceiver that can be obtained cheaply (for example an FT-7 or IC-202). Figure 1 shows the block diagram of the transverter, and most other designs would be similar.

The FT-7 transmits and receives signals in the 28 MHz band, between 28.000 MHz and 28.500 MHz. When the transverter is in the receive mode, signals at 432 MHz are mixed with a local oscillator running at 404.000 MHz, giving an output at 28 MHz which the FT-7 can receive. In the transmit mode, signals at 28 MHz from the FT-7 are mixed with the transverter 404.000 MHz local oscillator to produce a signal at 432 MHz which is then amplified and transmitted.

The control module does the following things:

1. Sequences the switching of relays between transmit and receive so that no damage can be done to any of the transverter modules.
2. Measures the VFO frequency of the FT-7 transceiver and converts the measured frequency to the 432 MHz transmit/receive frequency.
3. Inserts an 'over' signal in the audio stream to the FT-7 transceiver. This signal is either a 'K' in Morse code or a simple beep.
4. Can act as a Morse code 'keyer' or beacon.
5. Displays the voltage of the battery or power supply that is running the system.

It is important that the various relays and modules switch in the correct time relationship, for example, the transmit relay must be in position before the power amplifier puts out any power, and the transceiver must not transmit before the input relay has had time to switch from the receiver converter output to the transmit converter input. The design has four separate outputs that can be used to control various operations, and the time step between each output change can be easily controlled. The existing firmware sets the delay between each step in the sequence to 50 milliseconds. As already mentioned, the controller has four sequenced outputs and the transverter described uses only three outputs, the extra one can be used to switch a mast-head pre-amplifier if required. Table 1 describes the sequence of operation.

To make it easier to set the operating frequency (especially as the FT-7 has a fairly coarse analog dial), a frequency counter has been included. The value displayed is offset by the appropriate amount so that the displayed reading shows what the 432 MHz frequency actually is, that is, if the FT-7 frequency is set to 28.1 MHz, the FT-7 VFO is 5.4 MHz, but the controller shows a frequency of 432.1 MHz. The counter has a resolution of 500 Hz, but the frequency is displayed to the nearest kilohertz.

It is common practice for weak signal operators on 2 m and above to use an 'over' signal when at the end of each over. This is especially true when conditions are marginal and each operator is unsure if the other has ceased transmitting. The 'K' at the end of each over can often be clearly heard when the voice signal is unintelligible. The controller inserts a 'K' in Morse code each time the 'press-to-talk' switch is released. For convenience, the controller also includes a Morse code keyer and beacon so that CW contacts can be easily had, or a beacon can be set up for distant stations to hear when signals propagation is occurring. The keyer accepts a 'paddle' type key and the keying speed is adjustable.

Figure 2 shows the transverter unit mounted on top of the FT-7 transceiver. Short cables at the back connect the various signals between the two units, except for the microphone connection which is at the front. The paddle for the CW keyer connects to the connector on the right hand side of the unit.

Indication of battery voltage is useful, especially when operating portable during field days. Figure 2 shows the front panel display of the unit.

Operator action	Function	Result	Time delay
Press mic' PTT	Switch S1 on	Relay RL1 switches from Rx to Tx	50 ms
	Switch S2 on	Relay RL2 switches from Rx to Tx	50 ms
	Switch S3 on	Not currently used	50 ms
	Switch S4 on	Activate FT-7 Press-to-talk input	50 ms
Talk		Transmit	
Release PTT	Send 'K'	Send 'K' in Morse code	
	Switch S4 off	Release FT-7 Press-to-talk input	50 ms
	Switch S3 off	Not currently used	50 ms
	Switch S2 off	Relay RL2 switches from Tx to Rx	50 ms
	Switch S1 off	Relay RL1 switches from Tx to Rx	50 ms
Listen		Receive	

Table 1: Transmit/receive sequence

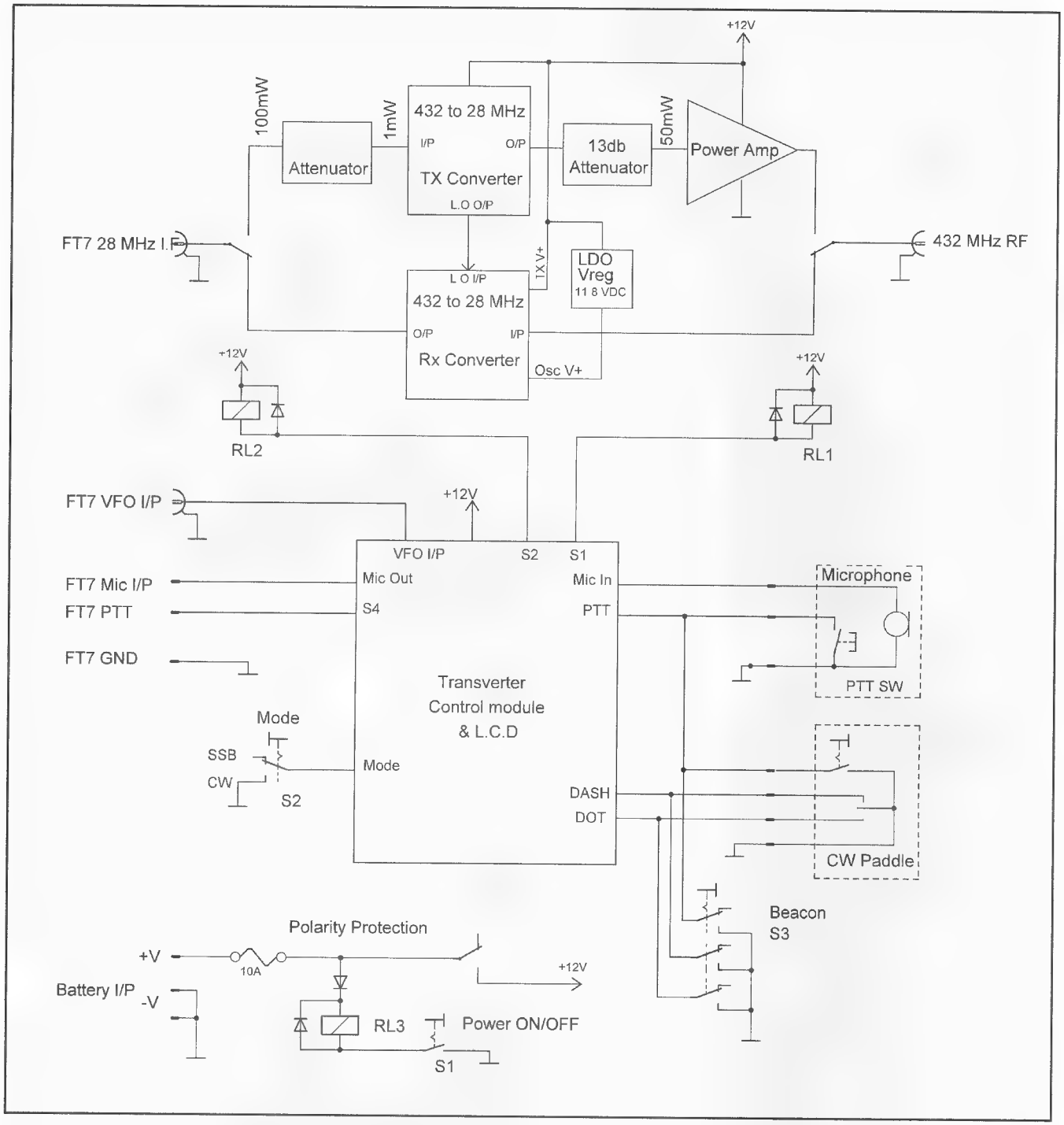

Figure 1: Block diagram of the transverter

Circuit Description

The control circuit uses a low cost Atmel AT90S8535 (or ATmega8535 with minor software changes) microcontroller to read the various input switches, perform the sequencing and output relay switching, frequency measurement, generation of tones for Morse characters and monitoring of battery voltage. The circuit can be divided into two functional areas:

1. Digital: The input signals from the various switch inputs are handled by pull-up resistors and Schmidt triggers (U3) which generate logic levels for the micro-controller input ports. Output signals from the micro-controller (U5) ports to the control relays are interfaced using a ULN2003 Darlington driver (U7). Frequency measurement is undertaken by an external 4 bit counter (U2B) and a 16-bit counter inside the micro-controller. The time-base for frequency measurement is derived from the 4.096 MHz crystal and a counter inside the micro-controller generates a 32 kHz pulse which

U4A and U4B divides by 128 to give a 250 Hz square wave at the output of U4A. The 250 Hz square wave gates the input signal so that the input frequency is counted for 2 ms every 4 ms. At the end of the count period, the external and internal counters are read and the value is converted to the 'on air' frequency. The crystal frequency was chosen so that convenient division ratios could be used in the various counters. Transistor Q1 converts the sine wave signal from the FT-7 VFO to a TTL level signal for the counter. (An RS-232 interface is also provided (U6) but it is not currently used.) The measured frequency, battery voltage and system status are displayed on a two line liquid crystal display. The display uses a four bit data interface and two control lines (enable and register select).

2. Analog: The analog section amplifies the signal from the microphone using a simple AC coupled amplifier (U9D) which is biased at half the supply voltage by U9A. When the 'K' signal, or Morse dots and dashes are required, the system firmware generates a sequence of sine waves from digital values output from the micro-controller ports PA0 through PA5 using a 6 bit 1R-2R digital to analog converter and amplifier U9B. A 6 bit converter uses 64 digital values to generate a sine wave from an internal look-up table. (1% tolerance resistors should be used for the 1R-2R network). The sine wave signal is filtered by a simple RC low-pass filter which consists of R28, R29 and C13. Analog switches (U10A and U10B) select whether voice or tones are sent to the output stage (U9C). The audio output signal is buffered by U9C and the level is then adjusted back to microphone (mV) level by resistors R41 and R42. The pull-up resistors on the outputs of U9B and U9D reduce the amplifier cross-over distortion by increasing the output stage bias current. Measurement of the system supply voltage is made using the internal 10-bit analog to digital converter and an external voltage divider. The divider ratio can be trimmed to exactly 3:1 using R11. So that the measured voltage is accurate, a stable reference of 5.120 volts is generated by U8. The reference voltage can be adjusted to the correct value using R44. A 5 volt supply for the circuit is developed using a conventional 3 terminal regulator mounted on the control printed circuit board.

Figure 2: The transverter unit mounted on top of the FT-7 transceiver.

The system also includes polarity protection so that the unit cannot be damaged by incorrect connection to a battery or power supply. To achieve the best frequency stability, the local 404.000 MHz oscillator is powered by its own low drop-out voltage regulator. This ensures that the oscillator is always powered by a stable voltage source.

Construction

All of the modules are mounted in a metal case, with the receive converter and control module housed within their own die-cast boxes. The die-cast box in which the controller is mounted prevents any of the high speed digital signals causing any interference to other parts of the transverter. All signals into, and out of, the controller and receive converter are passed through either feed-through capacitors, or are carried in screened cables via coaxial connectors. The power amplifier is separately screened using an aluminium plate and is connected via feed-through capacitors and coaxial cable. Due to the close proximity of all of the modules, extensive screening and good earthing is required, otherwise noise pickup and RF feedback problems are likely to occur. Small ferrite beads were placed over low-level audio lines to reduce any RF pickup.

Figure 4 shows the internal layout of the transverter showing the various modules. The transmit power amplifier is mounted behind the plate at the back of the enclosure. The transmit converter is the circuit board assembly that runs across the middle of the enclosure. The polarity protection relay is on the far left-hand side of the box, and the low drop-out voltage regulator is just visible on the far right-hand side of the enclosure adjacent to the receive converter.

Components

None of the controller components are difficult to source and the circuit could easily be built on 'Vero' board or similar if desired, however artwork for the control board can be supplied if required. For ease of use, the liquid crystal display was a large character type, with inbuilt back-lighting and it was obtained from Rockby Electronics (www.rockby.com.au). Source code for the controller can be supplied to interested constructors via the author.

There are many options for the transmit and receive converter modules.

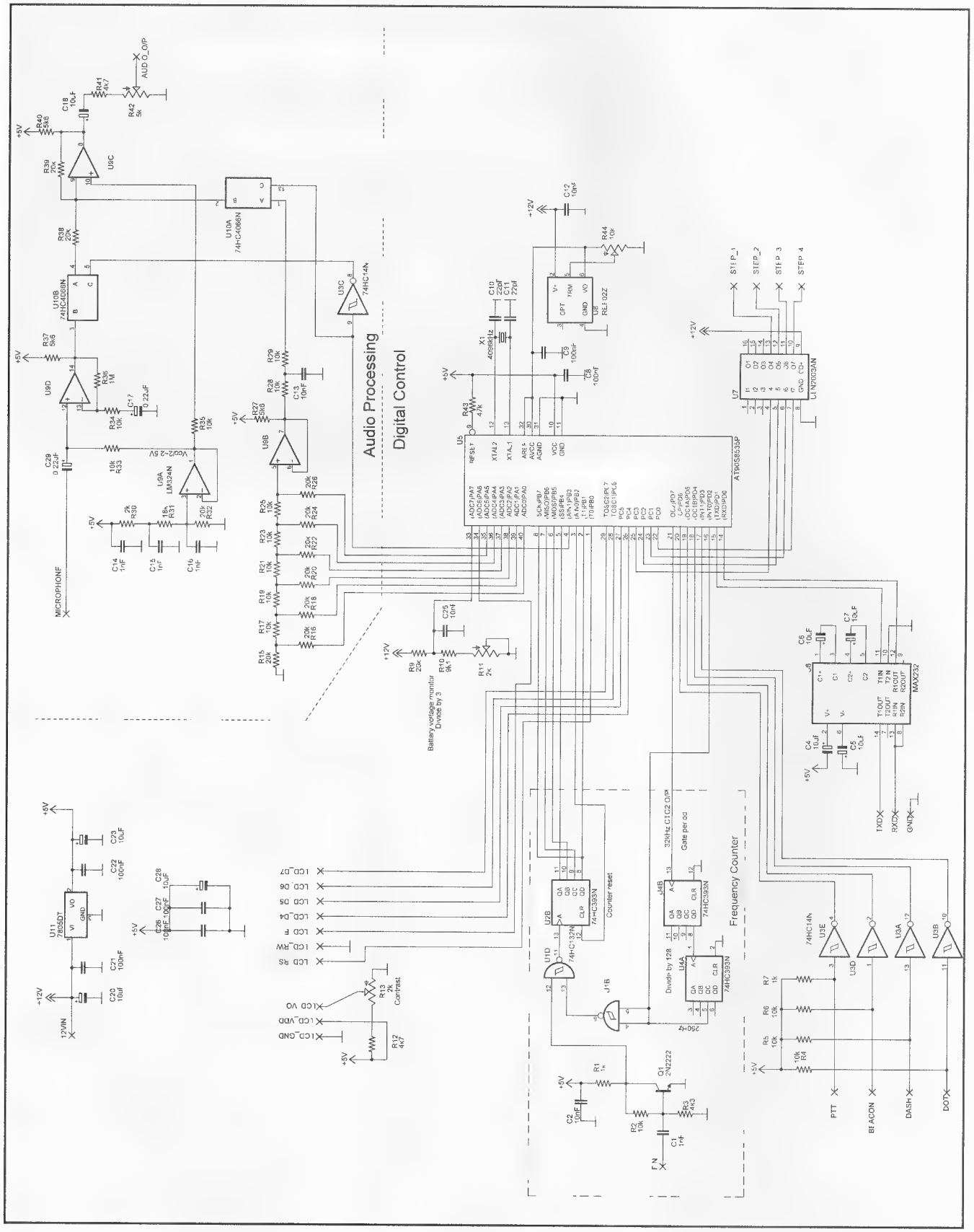

Figure 3: Schematic diagram of the controller module

The units used in this design were purchased at a field day and are quite an old design; however they work well in this application. There are many designs available on the web and in books such as the RSGB Radio Communications Handbook; these designs offer high performance and use modern components. A number of commercial designs can be purchased from vendors in this country (see www.minikits.com.au for various designs) as well as from overseas sources.

Conclusion

The design of a transverter controller has been presented; the design provides the user with a flexible sequencing system for controlling various parts of a transverter system. It also provides a number of operational conveniences which can be customised as required.

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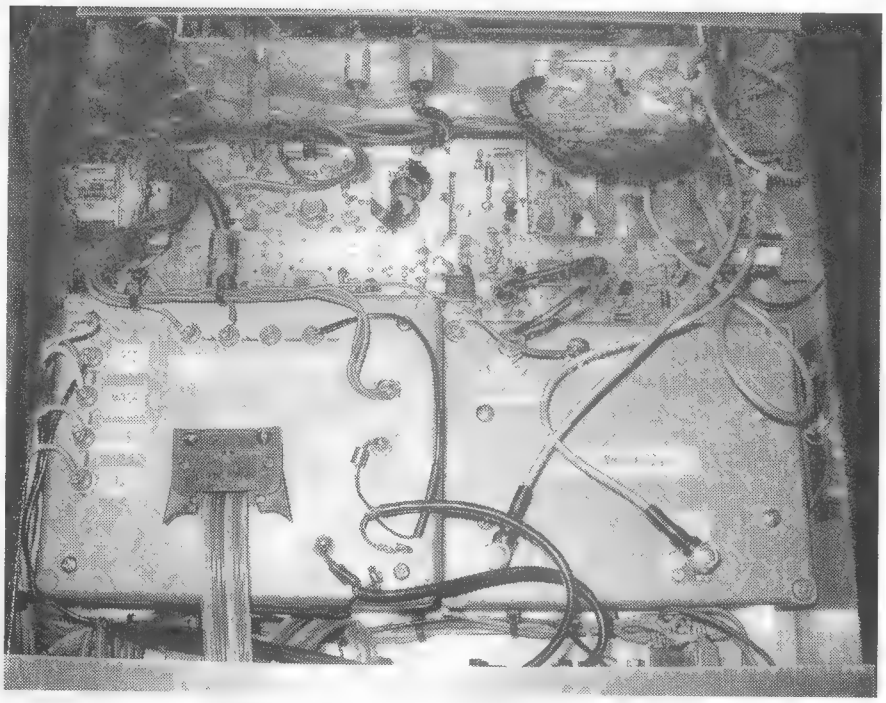

Figure 4: Internal layout of the transverter showing the various modules.

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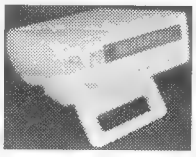

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Equipment Review

Icom IC-2820H dual band FM transceiver

cover story

Peter Freeman VK3KAI

Are you in need of (or interested in) a dual band FM transceiver with D-STAR capability? Then you should seriously consider the IC-2820H. This feature packed transceiver gives you the option of adding D-STAR whilst having a host of features for normal VHF/UHF FM operations.

In line with recent reviews published in AR, this review will give the perspectives of one user of the IC-2820H transceiver. Any readers interested in a review which includes a full set of technical measurements should seek out a copy of the November 2007 issue of QST, published by the ARRL. The IC-2820H is reviewed on pages 74 – 77 of that issue.

The IC-2820H is the latest of a series of dual band transceivers from Icom, including the IC-2700H and the IC-2720H. Readers should note that I personally own and operate each of these earlier transceivers. As a result, this user did find it very easy to start using the review transceiver without referring to the Instruction Manual.

The review unit was supplied with the optional UT-123 installed. This module provides Digital/D-STAR DV (Digital Voice) mode and GPS capabilities. An IC-91AD handheld transceiver was also supplied, to enable some exploration of operations using the D-STAR DV mode. Whilst some comments may refer to the IC-91AD, this review will focus on the IC-2820H.

On unpacking, the two units were quickly assembled without the need to refer to the instruction manuals. The result was instant success – working radios in basic analogue FM mode. The author found it very simple to enter the required frequencies for local simplex and repeater operations into the appropriate VFO channels and to use both units. However, it should be noted that the transceiver is quite complex – it will probably require most new users to make several visits to the Instruction Manual to become familiar with all the operational features.

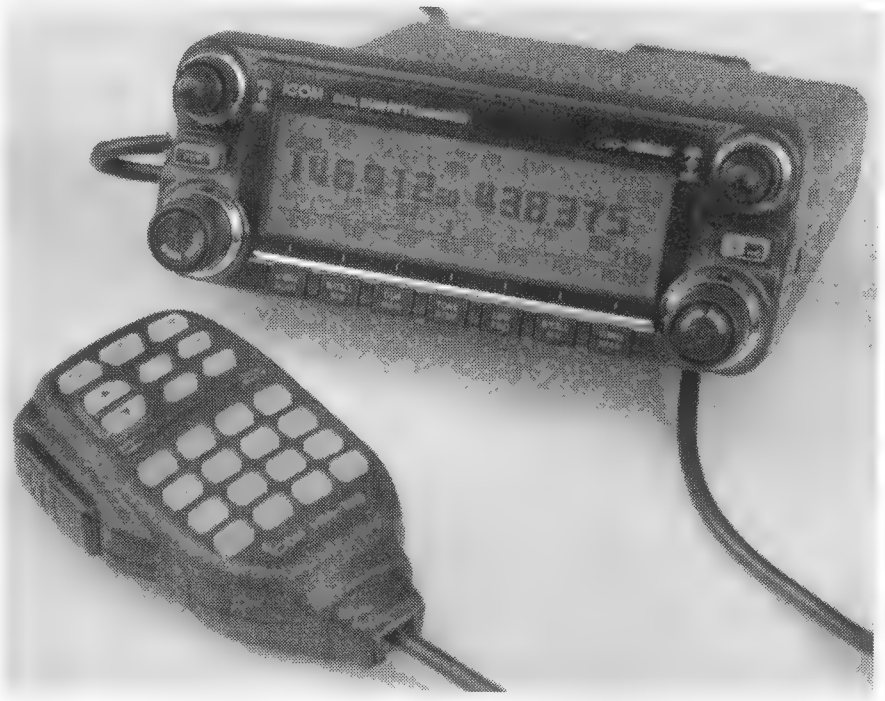

Photo 1: The Icom IC-2820H

IC-2820H features

The IC-2820H is a dual band FM transceiver covering the 2 metre and 70 centimetre amateur bands, with 50 W transmitter output on both bands. The transceiver control head has a large clear liquid crystal display which shows both receivers at the same time. The key features of the transceiver are:

- Diversity reception
- DV (Digital Voice) with GPS operation capabilities (with the optional UT-123 installed)
- V/V, U/U in addition to V/U simultaneous receive capability,
- Independent controls for both left and right receivers
- A separate controller for flexible installation
- A remote control microphone is included.

Comment will be made on some of these features later in this review.

Becoming familiar with the transceiver

Readers will have noted that, in some respects, the writer is not a good consumer – I opened the box and put the unit together without reference to the Instruction Manual. However, for any user that is less confident, the manual does have a very good "Quick reference guide" section near the front, which includes mounting and connection instructions and a quick guide to operation of the transceiver

– "Your first contact". As you open the box, the first things that you see are the Instruction Manual and a small booklet - a Glossary of "Ham Radio Terms". The glossary is available on the Internet (at http://w6trw.com/main/ham_radio_terms.pdf), courtesy of Icom America. The Glossary could be useful for many new amateurs.

The main body of the transceiver (the main unit) is very solidly constructed, with a die-cast chassis. There are several connection points and other features noticeable as the main unit is removed from the box. Located at the front are connections for the controller, the microphone, the GPS antenna, a data jack and a packet jack. Also clearly visible are two sets of indentations to accept the mounting magnets on the controller/display unit. At the rear of the main unit, the cooling fan is prominent, together with two SO239 antenna connectors. Only one of the antenna connectors can be used for transmitting – the other allows for the connection of a second antenna for diversity reception. Also at the rear are the DC power receptacle at the end of a short lead and two external speaker sockets.

Like many transceivers currently on the market, the IC-2820H has a controller/display head that can be mounted remote from the main transceiver body. One feature that is different from previous units in this series and from its competitors is that the control head attaches to a mounting plate or the transceiver body by the use of magnets. Even if you are planning to use the transceiver as a single unit, you are effectively remote mounting the control head. The transceiver is supplied with two separation cables: the 10 cm long OPC-1712 and the 3.4 m OPC-1663. Operation of the transceiver as a single unit requires the use of the shorter OPC-1712. When used as a single unit, there are cut-aways for the separation cable and microphone cable to exit (as required) from the front of the main unit.

If you have the UT-123 installed and wish to use the GPS capabilities, the controller will not sit on the front of the transceiver body if the GPS antenna cable is connected – you will need to remotely mount the controller. This characteristic is noted in the Instruction Manual.

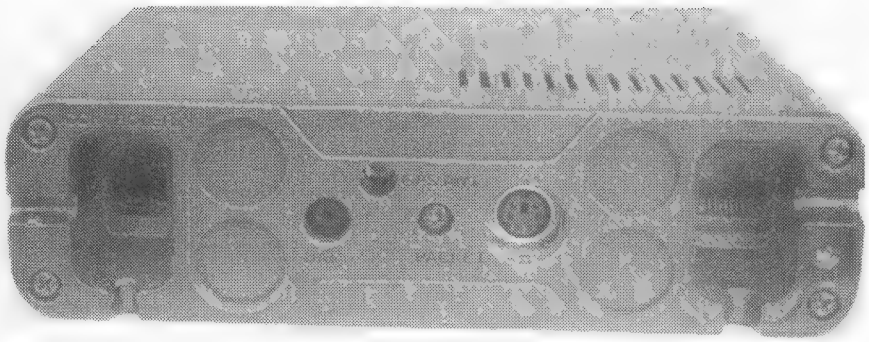

Photo 2: The view of the front of the main body of the transceiver, showing the various connectors and the two sets of magnet positions to mount the controller unit.

The controller has only a single connection, for the separation cable. As previously noted, the controller has two magnets on the rear to connect to any suitable surface or to the supplied remote controller bracket. The magnets are strong enough to hold the controller firmly, but not so firmly that it is difficult to remove easily. If mounting the controller on the main body, you can choose between two mounting positions, with the controller being up or down – the controller unit's height is greater than that of the main unit. The use of magnetic mounting is probably the reason why there is no connection of the microphone to the control head – any pull of a microphone cord would be likely to detach the head from its mount. Given that the transceiver is most likely to be mounted with the control head remote to the main body, it is a little surprising that the microphone is not fitted with a longer cord, or that a microphone extension cable is not supplied as standard.

The controller display is a large 93 x 28 mm dot matrix LCD, giving a crisp clear display over wide viewing angles. The background colour can be varied from green to amber.

Specifications

The transceiver is primarily for FM and DV modes (with the UT-123 fitted), with AM available in receive only. Frequency coverage for the Australian model is listed in Table 1. The memory system provides 522 channels, including two call channels and 20 scan edge channels. Power supply required is 13.8 V DC +/- 15%, with current consumption of 1.2 amps on receive (muted) to 13 amps on transmit. The entire unit has a mass of approximately 1.7 kg, with overall dimensions of 150 x 58 x 220 (approx.) mm (WxHxD) when configured as a single unit. Tuning steps can be set to 5, 6.25, 10, 12.5, 15, 20, 25, 30 or 50 kHz.

Table 1: Frequency coverage (MHz)

Transmit	Receive
144-148	(L): 116-549.995
430-440	(R): 118-173.995, 375-549.995, 810-999.990

Frequency coverage may be different on units not designed for the Australian market.

The receiver sensitivity in the amateur bands is specified as less than 0.18 uV in FM (12 dB SINAD) and less than 0.35 uV in DV (BER 1% with UT-123). Audio output at 13.8 V is more than 2.4

Photo 3. The supplied HM133 Remote Control Microphone – all controls at your fingertips.

W at 10% distortion with an 8 ohm load. The external speaker connections are 3.5 mm (1/8") mono (2 conductor) for an 8 ohm load.

Supplied accessories

The IC-2820H is supplied with the following Accessories:

- HM-133 Remote control hand microphone
- OPC-1132 DC power cable
- OPC-1712 Controller cable (10 cm)
- OPC-1663 Separation cable (3.4 m)
- Mounting bracket kit
- Microphone connector plate
- Remote controller bracket
- Microphone hanger
- Spare fuse

FM operation

In analogue FM mode, the transceiver performed extremely well. Having prior experience with Icom mobile dual band transceivers, it was very simple to get going and to use on-air, both at home and when mobile. In the short time available, I have not explored all the capabilities of this radio, but there are plenty of features to explore.

I have had some comments from others that the receiver does suffer from pager breakthrough. I did not experience any during my one long trip using the radio under review, but that trip was undertaken in the period just prior to New Year. It is possible that the level of pager traffic was lower at that time, as the issue of pager interference was one of interest. During my return journey through Melbourne from Geelong, I was listening with DV mode on the left channel and 70 cm FM on the right channel. One would not expect problems from pagers in DV mode, as the receiver would simply see the breakthrough signal and decode no valid data, and therefore not open the receiver mute.

I received good reports on transmit, using both FM and DV modes.

DV operation

One reason to consider purchasing this transceiver is the option of adding the DV voice mode by adding the UT-123 module. This allows access to the D-STAR system via 2 m and 70 cm.

However, being a new system, most will not have experienced this mode. Successful operation requires the appropriate equipment AND the correct settings in the equipment. Chapter 5 of the Instruction Manual describes DV mode operation and settings in 24 A5 pages. Several different settings need to be made before a successful contact can be made, even in simplex mode. The descriptions in the manual are quite thorough, but successful implementation does require the user to read carefully and to remember several definitions. But this should not be surprising – most things that are new technology require us to learn the new procedures and definitions.

In addition to the Instruction Manual, several sources of information can be found on the Internet about the D-STAR system and its use. Of most use to Australians will be the Strictly Ham website (http://www.strictlyham.com.au) and the Australian National D-STAR Web Site (http://www.dstar.org.au/). Both sites have some quick guides on frequencies in use and a "D-STAR Get-On-The-Air radio configuration" guide. It is potentially confusing that the names used on different model radios may be slightly different for the same functional meaning. To most users, this should not be a problem if they are only using a single radio, for example the IC-2820H. This should not be much of an issue once the user becomes familiar with the D-STAR system, as the functional definitions are consistent. Once you are used to the system, it should be easy to remember the slightly different name of the function in a different radio – for example, the names are slightly different in the IC-91AD handheld.

Having initially set up the required definitions and other settings in both the IC-2820H and the IC-91AD handheld, I tried the DV mode across the room – success for simplex operation. The next challenge was to listen to the Mount Dandenong repeater VK3RWN. Reception was initially adequate. Some digital artefacts were observed, probably as a result of low signal strength, phase distortion due to multipathing, or both. This result occurred when the IC-2820H was connected to a small vertical antenna mounted just above the gutter of the house, which had been adequate for local communications.

The next morning I moved a small 4 element Yagi into vertical polarisation. Once pointing toward the repeater, better signals were heard. The path to the repeater is a little over 100 km in length and crosses several ranges of hills. The predicted coverage map for the VK3RWN port C (146.9125 MHz) repeater indicated low signal strength was expected into the area around home. Having checked all the required settings and listened for a while, I successfully made contacts via the repeater. In FM mode, it is difficult for me to achieve a fully quietening signal into the co-located FM repeater. In DV mode, both transmitted and received signal reports were excellent. Whilst simply monitoring the repeater, stations were heard calling into Darwin and to and from overseas nodes via the Internet connected system. Again, received audio was generally excellent, with occasional "blips" when errors in the digital decoding occurred.

Several simplex DV contacts were made with Ralph VK3WRE, located approximately 20 km away with several obstructions in the path. Ralph was using the IC-91AD connected to an external gain vertical. Signals from Ralph were fine, even when running the handheld at low power.

In addition to DV voice communications, other operations such as low-speed data communication, brief message transmission, digital APRS (GPS-A), DV voice message storage and an emergency operating mode are possible. As a newcomer to the D-STAR system, I will not report on the system further at this time. As Editor, I would welcome an article for publication on the D-STAR system from a more experienced user.

The D-STAR system appears to be undergoing further development, as well as implementation into other capital cities (working systems are currently installed in Melbourne and Darwin). It will be interesting to explore the capabilities of the D-STAR system as time allows.

GPS functions

The UT-123 module includes a GPS receiver and antenna. The manual notes that the antenna is not waterproof, so it is not suitable for mounting outside the vehicle or house. I placed the antenna on the sill of the shack window. The receiver quickly acquired signals and located position. The GPS position data can be included in each DV transmission, using the GPS-A mode. The IC-2820H

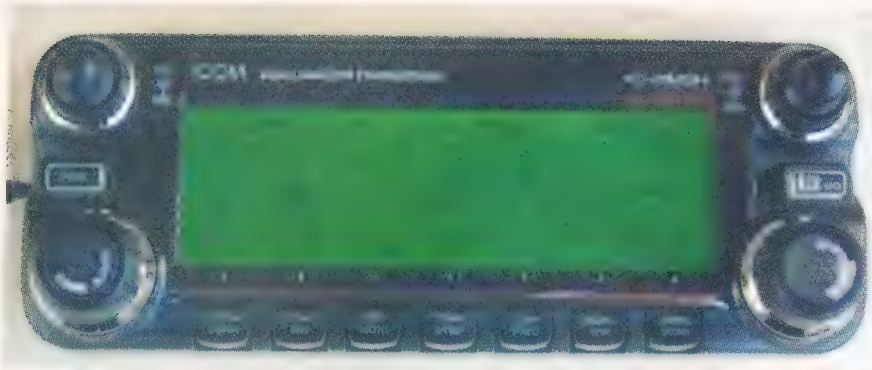

Photo 4. Close up of the controller showing one of the GPS position display options at a location close to the author's home.

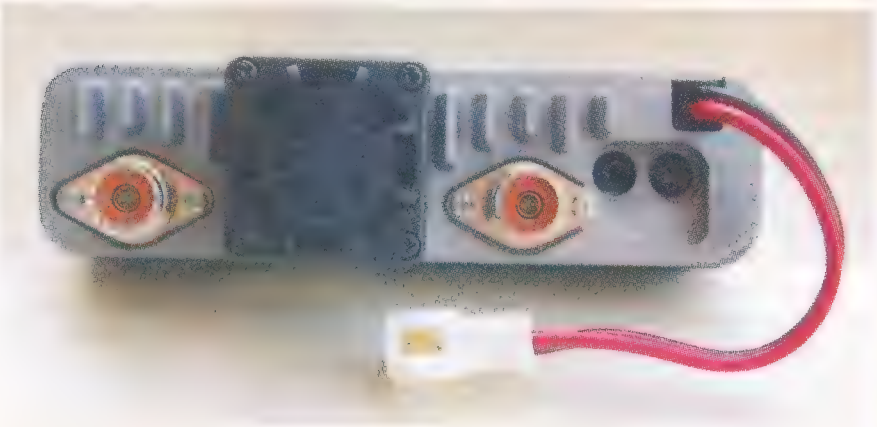

Photo 5: View of the rear of the main body of the transceiver. The antenna socket at the left is the main Tx/Rx antenna. The cooling fan is obvious. The centrally located antenna socket is for "Diversity Reception" (see text). The two small sockets near the DC lead at the right hand side are the two external speaker sockets.

can also be set to sound an alarm if another DV/GPS user's transmitted position is close to your location. The display can also show the position, distance and bearing to another station's location, regardless of the location of the other station, local or in a far off land. Whilst similar to some features of APRS systems, it is only the GPS location data that is transmitted. I understand that a free software application tool is available to port the GPS-A data from the D-STAR system to APRS software applications such as UI-View, allowing station position to be displayed on appropriate maps.

The transceiver can send the GPS data in NMEA format to the Data port, allowing its use by software packages on a connected computer or for use by an APRS packet TNC. In the latter case, the TNC could be connected back to the IC-2820H via the packet port and transmitted as APRS packets using FM mode.

Memories

The transceiver has a total of 522 memory channels, including 20 scan edge memory channels (10 pairs) and 2 call channels. The memory channels can be organised into a total of 26 memory banks. Each memory channel can be programmed with the operating frequency, duplex offset and direction, subaudible tone encoder or tone squelch, its tone frequency and skip information (for scanning operations).

Whilst all this information can be set using the controller head or the remote control hand microphone, it is much simpler to manage these functions using the optional CS-2820 software package and the OPC-1529R programming cable or OPC-478 cloning cable. It is relatively simple to install the software, connect the cable, switch on the transceiver and read the data already loaded. It is a good idea

continued next page

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Silent key

Gordon Sutherland VK2ZSG

It is with deep regret that I advise the passing of Gordon Sutherland VK2ZSG, of Newcastle, NSW. Gordon passed away on Sunday 14 October, 2007, and his funeral was held at Broadmeadow on Thursday 18 October, 2007. A large number of Newcastle radio amateurs attended.

Gordon was born on 27 September 1925, at Waratah, NSW, and he lived in Newcastle all his life. He served his apprenticeship at BHP during World War II. After the war he joined the PMG Department as a technician at Mayfield. He stayed with the PMG until his retirement.

Gordon had many hobbies, mainly amateur radio, steam trains, and a passion for music. He obtained his amateur licence in 1960 and was active mainly on two metres with a home brew AM transmitter, but he also operated on six metres and 70 cm. Gordon liked building electronic test equipment and kits.

Gordon was a long time member of the Hunter Branch of the NSW Division of the WIA, later changed to the Hunter Radio Group. He held a number of committee positions with the group including Social Secretary, President for 30 odd years and Patron, and was honoured with Life Membership. Gordon also conducted the long running Monday night Hunter Radio Group broadcast as well as the Tuesday night RTTY broadcast.

Another of Gordon's passions was producing and presenting a radio program on the local university radio station 2NUR. He had a very extensive library of 78s, LPs and CDs covering the Big Band era of the 1920s through to the 1950s.

Steam Trains was another passionate hobby which resulted in an extensive library of steam trains from around the world.

I met Gordon when he came to our house to install a telephone in the 1940s. Later when I became interested in amateur radio, I attended the Hunter Branch monthly meeting at Tighes Hill Technical College where Gordon was in attendance. We struck up a long time friendship. I went to Gordon's shack in the 1950s to hear the ABC experimental FM broadcast station located at the PMG building at Gore Hill in Sydney. Gordon had built a VHF converter and receiver to pick up these broadcasts. The station was later closed to make way for regional TV stations.

Gordon was well known in the Newcastle area with the local racing fraternity, attending Newcastle race meetings and maintaining the public address system.

During Gordon's retirement years he kept up his interest in amateur radio and his other passions.

He is survived by his wife Ada and two sons, Grahame and Raymond.

Submitted by Rodney C. Prout VK2CN, Secretary/Treasurer, Hunter Radio Group.

Icom IC-2820H dual band FM transceiver

continued from previous page

to save this information, just in case you make a major blunder. Otherwise your option is to do a complete reset and start again. It is easy to set up the variety of memory channels and then banks in the software. You can also change a number of other transceiver settings within the software. Once you are happy, save the file and then transfer the data to the transceiver. Switch the transceiver off and then back on to activate the new configuration. Simple!

Other features

There are a number of other features in the transceiver. I will not attempt to describe them all. Interested readers will find the promotional brochures and Instruction Manuals available for download on the Internet with some simple searching.

Some may find the band scope function of use – it allows you to watch conditions near the receiving frequency and visually assists in finding other stations. The transceiver also includes an automatic attenuator. The Receive Diversity function allows for a second antenna to be used on receive – the transceiver compares the signal strength from the two antennas and automatically selects the stronger signal.

Conclusion

The IC-2820H is a highly capable dual band FM transceiver. Once you add the UT-123 module, you gain DV mode capability and are therefore able to access the D-STAR system network, if in range of a D-STAR repeater. The transceiver is certainly a significant investment, with the current street pricing of $795.00, and the UT-123 at $319.00. After having the transceiver for almost three weeks, I am seriously considering making that investment.

Thanks to Icom Australia for the loan of the IC-2820H, the IC-91AD, and the required software and data communication cable.

ar

The ¼ wave squid pole antenna

Dallas Jones VK3DJ.

I love operating portable. Getting down by the beach, out in the bush or sitting in a paddock, hooking up an antenna and calling CQ is just so satisfying.

Often, as soon as you call CQ and announce you are 'portable', stations are keen to work you. Portable stations also seem to be popular when there is a bit of a dog pile or during contests. So long as you can make yourself heard you will be kept busy! Making yourself heard means lots of power or a good antenna. Now for most of us running a linear on the front seat of the family sedan is a little unlikely and hard on the battery, so the best option (as is always the case) is an efficient portable antenna.

I have spoken to a few people recently who have used a 'squid pole' as a support for an antenna in various ways. I thought I would try and get it to work as simply as possible. The squid pole antenna is the ideal project for Foundation licence holders or anyone who would like to get out and work some portable DX.

There is nothing new about the physics behind the squid pole antenna. It is just an interesting way to make a lightweight, portable, inexpensive antenna that gets out surprisingly well. Since getting my call five years ago, I have built a number of portable antennas, from mobile whips to wire dipoles and even a freestanding full-height aluminium 20 metre vertical. Each had exactly the same basic design requirements. They had to be:

- simple and easy to make.
- relatively low cost to build.
- quick and easy to erect.
- built from readily available components.

The squid pole antenna meets all of these basic design requirements. Plug it into your rig and operate within its parameters and you get good results. I have built mine to operate on 80 m, 40 m, 20 m and 15 m. Those of an experimental disposition could readily modify this antenna for other HF bands. I am currently working on 160 m but more on that another time.

As its name suggests, this antenna is based on a 'squid pole'. This is an 8.4 metre long, telescopic, fibreglass fishing pole of the type which is readily available from good fishing or sports stores for about $40. The squid pole collapses into itself to a length of about 1 metre, making it extremely portable. There are slightly shorter poles available (7.5 metres), a bit cheaper. These are OK too, just leave the top wire the same length and shorten the bottom wire to suit the smaller pole.

15 and 20 metres

The 15 and 20 metre band antennas are simple ¼ wave verticals operated either against the vehicle body as a ground or an elevated ground plane.

For 15 metres, cut a length of stranded hook-up wire 3.280 metres long and suspend it from the top of the squid pole. Extend the pole only as much as needed. The centre conductor of the coax is connected to the wire, with the braid going to a good earth on your car via a short connection. I made a connector bracket to connect my hook up wire and my earth wire to. I can then connect my coax to it and run this to the rig. Alternatively you could extend the pole to its full height and use another three or four wires of the same length as the vertical radiator as an elevated ground plane.

For 20 metres, it is exactly the same as the 15 m version, only cut the wire to 4.830 metres and extend the pole accordingly. Use either the car for the earth or an elevated ground plane with each wire also 4.830 metres long.

For either band, once the antenna is constructed, check the SWR and trim back the radiator length until the minimum occurs at the band centre. The bandwidth will be sufficient to cover the entire band without adjustment.

40 and 80 metres

Full-sized ¼ wave verticals for these bands would be impractical for portable

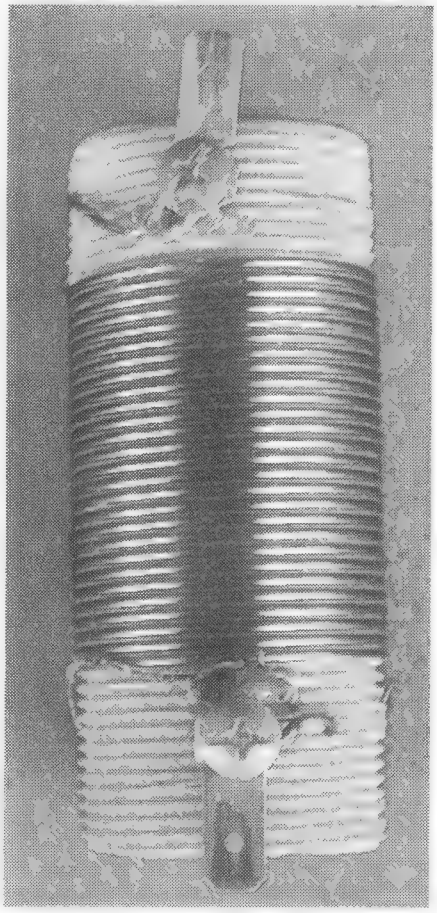

Photo 1: The 40 metre loading coil.

work, so loading coils are employed to resonate the antenna at the desired frequency. The loading coils are placed at about 3/4 of the distance up the pole which helps keep the antenna's efficiency reasonably high compared to base loading.

For 40 metres, the first thing to do is wind the loading coil. The coil inductance needs to be approximately 22 µH. I wound mine using 28 turns of 1.0 mm enamelled copper wire on a threaded piece of 32 mm diameter electrical conduit approximately 65 mm long. See Photo 1. I made a couple of plastic washers and fitted them into the conduit so as the centre of the coil is located 6.6

continued on page 22

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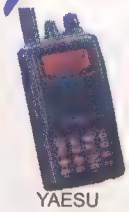

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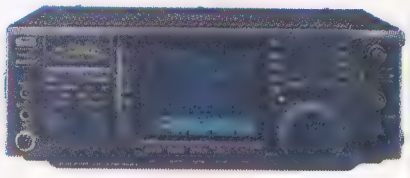

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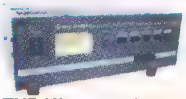

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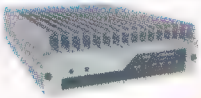

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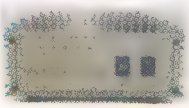

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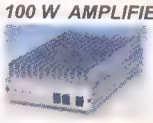

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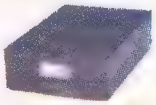

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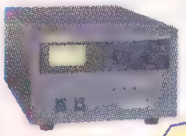

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m from the bottom of the squid pole. The wire below the coil is 6.17 m long and is loosely wound around the pole to keep it from flapping about. Above the coil is a wire about 2.17 m long, which provides sufficient capacitance to resonate the antenna at the desired frequency. The length of this wire is trimmed back until resonance is achieved as indicated by the SWR minimum. When adjusting the antenna resonance for each of the bands, make sure this is done out in the clear, away from trees and buildings. Connections are made using mating spade lugs on the loading coil terminals and the wire ends. You can use banana sockets and plugs if you choose.

As with the higher bands, the car body provided the earth connection. Wire radials become unwieldy for a portable antenna on 40 m and lower bands.

The feed point resistance measured 37 Ω at resonance. This comprises the antenna's radiation resistance, loading coil loss and earth resistance loss. Of these, the earth resistance will be the largest and will vary depending on the conductivity of the soil beneath the vehicle as well as vehicle size. A low feed point resistance indicates lower earth losses and a more efficient antenna. An antenna coupler or broadband transformer can be used to bring the feed point to 50 Ω. The antenna's bandwidth is about +/- 60 kHz at the 1.5 SWR points.

For 80 metres, as with 40 metres, the antenna is loaded with a coil to achieve resonance. The loading coil position is the same but of course more inductance, about 77 µH, is required. I wound mine using 49 turns of 1.0 mm enamelled copper wire, close wound on a piece of 50 mm electrical conduit, 70 mm long. See photo 2. I recommend winding a couple of extra turns (originally I started with 52 turns) and removing one at a time as required to bring the antenna close to the desired resonant frequency. Removing turns raises the resonant frequency. Like the 40 m coil, I made a couple of plastic discs and fitted them into the conduit to hold the coil in the correct spot on the squid pole.

On 80 m, this antenna's bandwidth is relatively narrow at only +/-15 kHz at the 1:1.5 SWR points. Because I wanted to cover the entire band, including the DX window, I chose to tune my antenna to 3.8 MHz and added a small tapped base-loading coil to bring the resonant frequency down in overlapping increments (see below).

The same bottom wire as 40 m is used on 80 m. I used a similar length top wire, which I then trimmed to resonate the antenna. The feed point resistance measured 30 Ω at resonance when my vehicle was parked over very conductive ground. As with 40 m, an antenna coupler or matching transformer would bring this to 50 Ω.

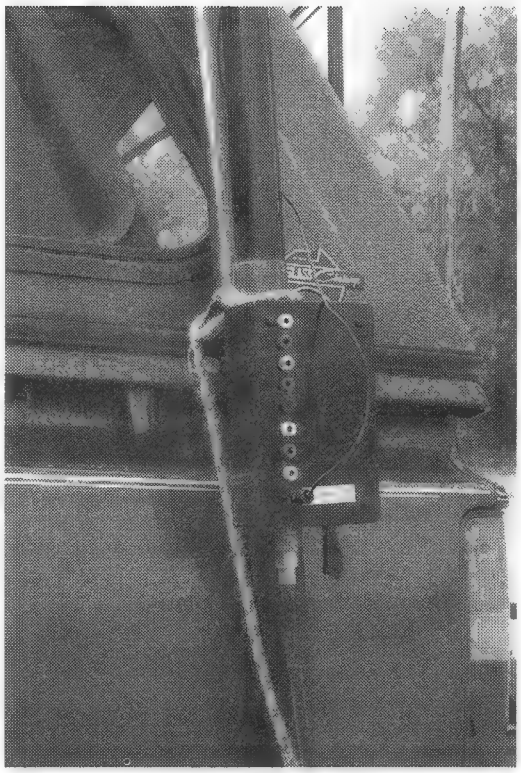


Photo 3: Tapped coil box for 80 metres.

An important consideration for both the 40 and 80 metre antenna set-ups is the wind loading on the squid pole. The pole will take a fair amount of strain but I found in strong wind the antenna became more horizontal than vertical! The larger and heavier the coil and the closer to the top, the more it will be blown around.

Silent key

Rob Apathy VK1KRA

After a battle with cancer, Rob Apathy VK1KRA, past President and Federal Councillor for the ACT Division of the WIA, died on 7th August 2007. He was aged 72.

He was first licensed as a novice soon after it became possible in the late 70s. He was a keen HF operator and extended his interest to the VHF bands as soon as he could. He also enjoyed operating in the field and was an enthusiastic member of many field events run by the Canberra group, on HF and VHF bands. He led the Canberra WICEN group in the 80s. As Federal Councillor for VK1, he was a delegate to several WIA Federal Conventions on behalf of the ACT Division and participated with enthusiasm and energy.

While he was qualified in Psychology, Rob's professional career spanned from psychology and remedial therapies to computer systems development among others. He was also a member of the Army Reserve.

His hobby interests included amateur radio, astronomy and radio astronomy but he had an enquiring mind and curiosity about a wide range of subjects. He was the coordinator of a successful moon bounce operation at the University of Canberra in 1995, celebrating the 100 year anniversary of Marconi's first radio transmission and reception.

He also coordinated a number of Amateur Radio Astronomy projects involving both the VK1 WIA division and the Canberra Amateur Astronomy community. In 1978 he was the team manager for Ken Warby's successful water speed record on Blowering Dam (see www.kenwarby.com) and played a major part in the development of the CREST emergency CB radio monitoring service.

Our sympathy is extended to Rob's family.

Submitted by Andrew Davis, VK1DA

Guying the antenna with polypropylene string should be considered if this is a problem.

There are numerous variations that you can do with this basic design. Running elevated ground radials above the vehicle will reduce losses attributed to poor coupling of the vehicle to ground. Of course, anything extra you add to the antenna will complicate setting up and maybe the portability of the antenna. At the moment, I can set up the 80 m antenna and be on air in five minutes, so adding a few ground radials may improve things but you will need more space and more time. Experiment with it and decide what is best for you.

Tapped coil box for 80 m

This consists of a small coil inside a plastic 'jiffy box'. See photo 3. The required inductance of about 12 µH is achieved with 25 turns of 0.5 mm enamelled copper wire wound on a threaded 32 mm former. The coil is tapped at 8 points, which are brought out to 4 mm banana plug sockets mounted on the wall of the box. The taps are at the 12th, 14th, 16th, 18th, 20th, 22nd, and 24th turns.

As mentioned above, for 80 m the antenna is resonant at 3.8 MHz. Inserting the base loading coil with the tap set to the first position brings the resonance down to about 3.7 MHz. Each further tap drops the resonance in overlapping increments of about 30 kHz, allowing coverage of the entire 80 m band.

I have done some testing around Victoria and without exception this antenna arrangement has proven to return very good signal reports on all bands. A friend of mine, Gavin VK3VTX, is touring Australia and we built one of these for him to take on his trip. So far, reports are encouraging with S8 and better being common.

Photo 4 shows me operating on 40 m on a farm near Ouyen. Reports on the day were 5/9 to VK2, VK3 and VK5, despite the obviously poor ground conductivity in this region. Photo 5 shows my complete portable HF kit.

Many thanks must go to my friends at the Geelong Amateur Radio Club, who have put up with my relentless talk about the 'squid pole' antenna. Special thanks go to Chas VK3PY, who started me off on the squid pole journey mid way through last year and has since been a regular sounding post.

If you decide to build one, good luck with it, it is not difficult and it is very rewarding.

ar

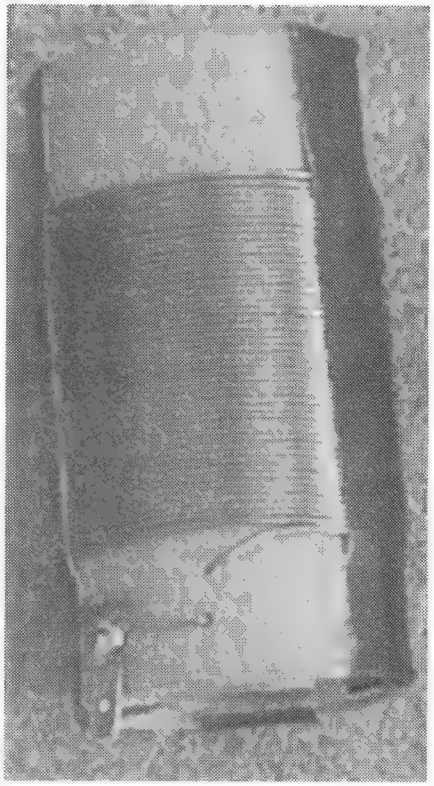


Photo 2: The 80 metre loading coil.

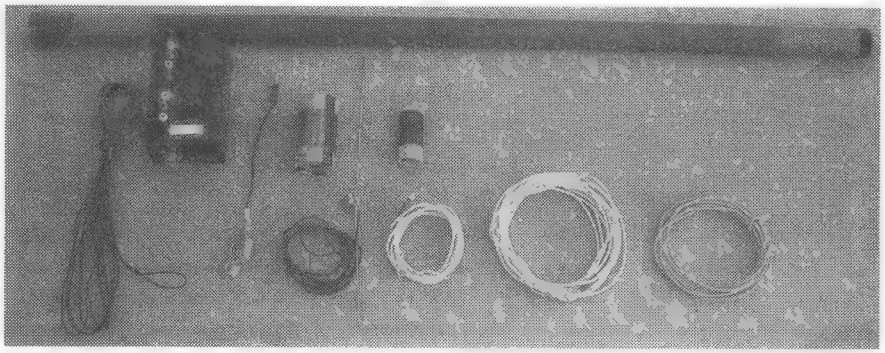


Photo 5: The complete portable HF kit.

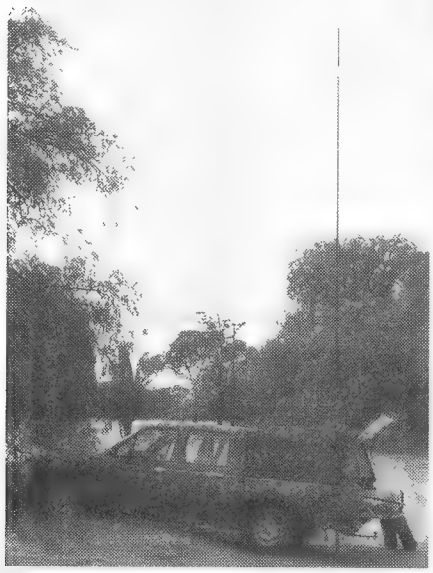


Photo 4: Operating 40 metres near Ouyen.

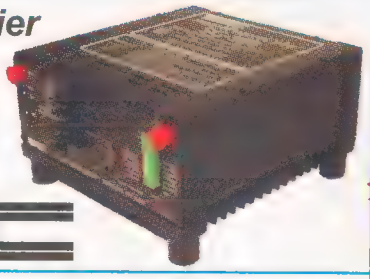
CALL FOR PAPERS

Amateurs (and others with material to contribute) are invited to submit titles and outlines for topics to be presented at GippsTech2008. Presentation slots can be brief (5 – 10 minutes) through to one hour. Anything longer – you will need to justify!!

Presentations can be formal or informal, or display. We use a lecture theatre for the formal (and semi-formal) presentations. Displays are open during coffee/tea breaks and after lunch. Potential presenters are welcome to contact the Chair of the Organising Committee, Peter VK3KAI (vk3kai@wia.org.au), direct for further information or to suggest a topic.

The conference is held in Churchill about 170 km east of Melbourne. Further details can be found at the Eastern Zone Amateur Radio Club web site at http://www.vk3bez.org/

SGC SG-500 Power Cube HF Amplifier



An HF linear amplifier ideal for high power operation in portable, mobile and base station situations.
It can deliver up to 500W CW or PEP with as little as 35W drive.
Fully automatic bandswitching and RF detect PTT.
It uses one of the most advanced self protection systems on the market to provide maximum stability and reliablity FCC Certified. **Visit our web site for further details or call for a brochure.**

SGC

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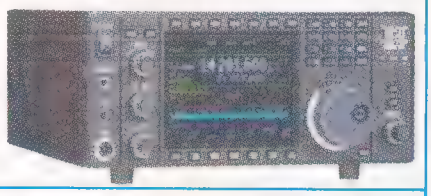
OMNI-VII is the first truly Net-Ready ham transceiver.

• No PC required at the rig to operate remote! • Delivers live receive AND transmit operation from anywhere in the world from wideband Internet access! • A simple GUI written for the OMNI-VII downloadable free or latest GUI source code can be downloaded to DIY • Three built-in filters at 20 kHz, 6 kHz, and 2.5 kHz Optional Collins mechanical filters at 500 Hz and 300 Hz. • Filters are auto or manual. • 37 built-in DSP filters. • Transmit 6 - 160 meters, 100 watts Receive from 500 kHz -30 MHz continuous plus 48 to 54 MHz. • SSB, CW, AM, FM, Digital modes. • 17 selectable transmit bandwidths. • RX EQ and TX EQ in 6 db/octave filters selectable in 1-dB steps. • DSP Noise Reduction, auto or manual notch. • QSK CW has adjustable rise and decay times, hard or soft key options.



Palstar

TTS is the local home of Palstar

Superbly engineered and robustly built in the USA

ZM30 Antenna Analyzer

The Zm30 is an automated micro-controlled SWR antenna analyzer with a 8 bit micro-controller with a precision low power DDS signal generator. It also includes a self-calibrating reflectometer and displays SWR at selectable frequencies from 1 Mhz to 30 Mhz. It measures: SWR, impedance, reactance, inductors and capacitors, transmission lines, stubs, Q, and resonant frequency. There is a serial port for field upgradable software. Battery operated. As on all Palstar products the front panel is powdercoated.

AT1KP Tuner

Differential capacitor tuning, 2 stators, 1 rotor. 2 controls to precision tune, ceramic body roller inductor and high power balun. Peak and Peak Hold dual cross-needle metering.

● 1200 watts pep ● 160m to 20m(1200+/-j1200), 10m to 15m (1000+/-j1000) ● Output to both balanced and unbalanced lines ● 20 ohms to 1200 ohms Impedance matching range ● 6 position mode switch for multiple antennas ● Backlit Crossneedle metering (wall transformer supplied) ● Meter power range 0-300 watts / 0-3000 watts ● 270 mm w x 115 mm h x 280 mm deep.

Mean Well PB 360P-12 battery charger

NEW

From one of the world's leading switching power supply manufacturers comes this charger, one of more than 2000 various pieces of Mean Well equipment that facilitate power world-wide to the medical, communicatons, military and automation sectors. In the TTS philosophy of reliable quality for less, we offer this state of the art battery charger. 14.4 V 24.3 A, 3 stage charging, simple switch between 90-132VAC and 180-264VAC, remote on/off, fan cooled, many protections.

"NO NOTICEABLE RF INTERFERENCE"

We supply RF cables terminated with professional grade connectors to suit your application.
Call for a price

NEW

SCRUB POLE

Portable or fixed base

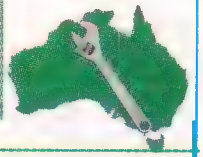
10 metre long HF vertical

The antenna collapses down to 6 x 1.8 m sections of 6000 grade aluminum tube.

It is protected with a durable powder coat finish in a pleasing grey/ green color.

The natural resonance is in the 40 metre amateur band. It can be easily tuned to other bands using optional coupling units or an auto tuner.

Call us for additional specs



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We look forward to having a yarn with you at Kyneton on Sunday the 10th of February

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Robin Harwood VK7RH

Worth celebrating...

December turned out to be a very interesting month. Several historic radio anniversaries fall during this month, including the first public demonstration of wireless telegraphy, by Sr. Guglielmo Marconi on 11th December 1896 in London. Then on December 12th 1901, Marconi and his team transmitted across the Atlantic Ocean, from Poldhu, Cornwall to St. Johns, Newfoundland. The receiving equipment was crude by today's standards but it did happen and as they say the rest is history.

Another anniversary was celebrated on 19th December. The BBC World Service commenced on that date in 1932 and the publicity machine certainly reminded their worldwide audience of that. However, shortwave no longer features prominently in their output. They prefer to stream their audio either by podcast or via online streaming. As well, the BBC World Service is available over 500 stations on FM. For example, the BBC commenced broadcasting in St. Petersburg and Moscow, through a partnership with a local broadcaster. However it came unstuck after the coverage of domestic events upset the Russian authorities. Then inexplicably, the BBC decided to reduce or curtail Russian language transmissions in October because they felt people could access the Beeb via the Internet. There is another irony: The Russians and their CIS partners are only too eager to relay BBC programs in other languages via shortwave, provided they are not for Russia or the CIS.

Radio St. Helena came and went and, again, we had no propagation. Listeners in Europe and North America were able to hear the SSB signal on 11092.5. Unfortunately there was nothing here. But I will let you into a big secret. I did hear it! OK, I confess, I cheated by using an online receiver in Cornwall. Yes they are back, but in a private capacity by invitation only. Signals from RSH were there but not outstanding. The modulation was up and down and audio from incoming telephone calls sounded better than from the studio mike. The music was also clear. Only regret I have is not being able to hear it direct and claiming a new country.

Malcolm VK5BA wrote to me about receiving DRM here in Australia, after recently purchasing a DRM demodulator for his receiver. He naturally wanted times and frequencies audible here in Australia. John VK4BJ recommends the following web link for information on the latest availability of DRM. It is http://home.arcor.de/carsten.knuetter/drm.htm Also you could try www.drmx.org Radio New Zealand International does provide consistent DRM signals into Australia. You can check out their status at www.rnzi.com Radio Australia has also been experimenting with DRM from Brandon QLD on 9660 in our local evenings but VK4BJ has been unable to resolve any audio.

Trevor VK4ZTV wrote to me that he was hearing an unidentified station on 15665 from 0300 to 0700. It is broadcasting continuous music of Asian variety with no identifications. It turned out to be the infamous "firedrake jammer". Yes, Trevor, it is based somewhere in China, probably from multiple sites and it is easily found, usually against an external sender broadcasting to China.

I also noted that the Sydney-Hobart yacht race communications net on 6516 experienced severe interference in the evening hours from a broadcaster on 6518. It came from a station in North Korea, trying to avoid South Korean jammers. Both sides routinely jam clandestine broadcasts from one to the other. Listen to how effectively the North jams South Korea on 6348 and the South jams the North on 4450 and 4120. Also there was severe QRM on 6516 from the Chinese wide frequency radar station on Hainan Island. The latter also wipes out the lower end of our 40 metre band at night.

Well that is all for now. Hopefully the sunspots will resume and dramatically improve propagation. Until next time the best of 73 and good monitoring.

de VK7RH

TVI High Pass Filter with Braid Breaker

An inline TVI filter with Braid Breaker.

A large amount of TVI can travel down the outer braid of Coax as well as the centre conductor. The braid breaker isolates the centre conductor and braid from the TV/VCR/DVD. The High Pass filter cuts in at 50MHz. This filter has 80 dB attenuation at 40, 80 and 160 metres.

Pager Notch Filter:

A receive filter that can be used in an outdoor housing (Pictured) to be mounted close to your antenna on the mast, or can be used in a diecast box for indoor use near your transceiver or receiver. The filter is set to 148.5 MHz but may be tuned by the user across the 148 to 149 MHz Pager band. A selection of connectors are available including BNC and N Type. Where transmit is required this filter can be switched out of circuit by the use of coaxial relays linked to the PTT switch.

Contact us if you need a special filter, we manufacture here in Australia rather than overseas.

www.vicnet.net.au/~jenlex

Email: jenlex@vicnet.net.au

Phone: (03) 9548 2594

FAX: (03) 9547 8545

AMSAT

Bill Magnussen VK3JT

ARISS Upgrade – an appeal

A note from Stefan VE4NSA:

A short time ago, two ARISS antennas for L/S band were installed on the European Space Laboratory Columbus. The Columbus module will be delivered to the International Space Station by a Shuttle mission in 2008. These antennas and associated equipment will allow us to work with and through the ISS on L and S band. This will be just fantastic and opens up great opportunities for Amateur Radio on the ISS. ARISS-Europe and its chairman Gaston Bertels ON4WF have done a tremendous job getting this done with the help of many others. Significant funds were raised by folks all around the globe and ESA (European Space Agency) has taken on a major portion of the cost. However, the project still needs to raise funds. Please go to: http://www.ariss-eu.org/columbus.htm and make a donation.

73, Stefan VE4NSA.

The ARISS project is of importance to all satellite operators. The multitude of modes and frequencies that have been made available to us all is worthy of our support. ISS is a regular visitor to our skies in VK. It affords us the opportunity to hone our skills in many areas of operation and this new addition will extend this to practice for the forthcoming high orbiters. Please support this appeal.

ANDE Competition.

Did you copy the last (or close to last) telemetry frames from the ANDE-MAA satellite (Nav Oscar - 61)? ANDE is getting close to de-orbiting as this column is being written and it will be well and truly burned up by the time you read this copy. The competition may however still be open and it would be a great credit to any telemetry buff to have copied ANDE's last frame. Similar competitions have been run before and VKs have traditionally done well. Any takers for the crown on this occasion?

Six-monthly review of Ups and Downs

As in previous instances, this review will deal only with amateur radio satellites that are currently fully or mostly operational in our part of the world. There will be times when a particular satellite may not appear due to some usually short term problem. For more up to date information refer to the appropriate web site on the internet. It is quite impossible to keep a list like this absolutely accurate, all of the time. The CubeSats and/or educational satellite packages still tend to dominate the list but their status can change at no notice at all. Some could have re-entered by the time you read this column. Many have not been activated on the ham bands as yet. These tiny satellite packages are often designed and built by University or College students and usually focus on data collection in some specific area of science. The presence of their telemetry beacons in the amateur bands is often sponsored by a radio club or an individual college staff member who is a ham in the hope that the world-wide amateur radio satellite community will provide feedback to the students in the form of telemetry collection or advice. In turn they provide the amateur community with practice in tracking and telemetry gathering techniques that will be valuable, particularly to newcomers and to those wishing to evaluate their ground station performance.

To save space only those satellites that are listed by reliable sources as operational will be included in the list. The day to day situation is probably best followed on the AMSAT-NA bulletin board as even the AMSAT-NA web site cannot hope to remain abreast of day to day happenings. You will notice that a number of the CubeSats have their status listed as 'in-orbit'. My guess is that means the control stations have confirmed they are operational and presumably transmitting telemetry on demand. No individual web sites are listed for these satellites but the AMSAT web-site has more information. The list is in order of Oscar number where possible.

AO-7 AMSAT OSCAR 7

Catalog number: 07530
Launch Date: November 15, 1974
Status: Operational depending on amount of sunlight
Current Mode: Listen before transmitting
Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1 W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8 W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2 W PEP)
Beacon: 29.502 MHz CW
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php

UO-11 OSCAR-11 (for telemetry buffs only)

Catalog number: 14781
Launched: March 1, 1984
Status: Semi-operational.
Current Mode: Telemetry Downlink – 2 m

The AMSAT group in Australia

The National Co-ordinator of AMSAT-VK is Graham Ratcliff VK5AGR. Contact Graham if you wish to be placed on a mailing list for breaking news and net reminders. As a forum for members AMSAT-VK operates two monthly nets.

AMSAT-Australia Echolink Net

The "Echolink" net meets on the second Sunday of each month. Anyone with an interest in Amateur Radio Satellites is welcome to join the net. Graham VK5AGR acts as net controller. The net starts at 0500 UTC during summer time periods and 0600 UTC during winter standard time periods. Connect to the AMSAT conference server on Echolink a few minutes before these times.

AMSAT-Australia HF net

The HF net meets informally on the second Sunday of each month. In winter (end of March until the end of October) the net meets on 3.685 MHz at 1000 UTC. In summer (end of October until end of March) the net meets on 7.068 MHz at 0900 UTC. Start listening 15 minutes before these times.

All communication regarding AMSAT-Australia matters can be addressed to:

AMSAT-VK
9 Homer Rd
Clarence Park SA 5034

Graham's e-mail address is:
vk5agr@amsat.org

Telemetry Downlink: 145.826 MHz FM 1200 AFSK

Due to solar eclipses which will continue until late August 2007, the beacon will only transmit for about one orbit every 21 days. It is unlikely to be heard during this period.

http://www.users.zetnet.co.uk/clivew/

AO-16 PACSAT

Catalog number: 20439

Launch Date: January 22, 1990

Status: Semi-operational

Current Mode: V/U

Digipeater - Authorized for APRS usage

Uplink: 145.900 MHz FM 1200-baud Manchester FSK

145.920 MHz FM 1200-baud Manchester FSK

145.940 MHz FM 1200-baud Manchester FSK

145.960 MHz FM 1200-baud Manchester FSK

Downlink: 437.026 MHz SSB 1200-baud PSK

Mode-S Beacon: 2401.1428 MHz

Broadcast Callsign: PACSAT-11

BBS: PACSAT-12

http://www.amsat.org/amsat/sats/n7hpr/ao16.html

GO-32 Gurwin TechSat-1B

Catalog number: 25397

Launch Date: July 10, 1998

Status: Operational

Current Mode: V/U

Downlink: 435.225 MHz FM (9600-baud FSK)

Uplinks: 145.850 FM, 145.890 FM, 145.930 FM, 1269.700 FM, 1269.800 FM, 1269.900 FM

Broadcast Callsign: 4XTECH-11

BBS Callsign: 4XTECH-12

http://www.iarc.org/techsat/techsat.html

NO-44 PCSAT

Catalog number: 26931

Launch Date: September 30, 2001

Status: Operational only in Full Sun Light

Current Mode: V

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud

Special Usage Downlink: 144.390 MHz 1200 Baud

http://pcsat.aprs.org

SO-50 SAUDISAT-1C

Catalog number: 27607

Launched: December 20, 2002

Status: Operational.

Current Mode: V/U

Uplink: 145.850 MHz FM - 67.0 Hz PL tone

Downlink: 436.795 MHz

Mode and Antenna Polarization:

V: Linear

U: Linear

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):

1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.

2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to switch the repeater on and off within the 10 minute window.

3) Sending the 74.4 Hz tone again within the 10 minute window will reset the 10 minute timer.

AO-51 ECHO

Catalog number: 28375

Launch date: June 29, 2004

Status: Voice Repeater

Current Mode(s): FM Repeater - V/U

Analog voice downlink: 435.300 MHz FM, 435.150 MHz FM, 2401.200 MHz FM

Analog voice uplink: 145.880 MHz FM, 145.880 MHz USB, 145.920 MHz FM, 1268.700 MHz FM - 67Hz PL tone

Digital Downlinks: 435.150 MHz FM 38k4 Digital, Pacsat Broadcast Protocol (PBP), 435.150 MHz FM 9k6 Digital, PBP

2401.200 MHz FM 38k4 bps, AX.25

Digital Uplink: 145.860 MHz FM 9k6 Digital, PBP

1268.700 MHz FM 9k6 PBP Digital

Beacon: 435.150 MHz

Mode and Antenna Polarization:

T: Linear

V: Linear

U: TX A (usually digital) LHCP

TX B (usually analog) RHCP

L: Linear

S: Linear

Broadcast: PECHO-11

BBS: PECHO-12

http://www.amsat.org/amsat-new/echo/

VO-52 HAMSAT

Catalog number: 28650

Launch Date: May 05, 2005

Status: Operational

Current Mode: U/V - Indian Transponder

Indian Transponder:

Uplink: 435.220 to 435.280 MHz LSB/CW

Downlink: 145.870 to 145.930 MHz USB/CW

Dutch Transponder:

Uplink: 435.225 to 435.275 MHz LSB/CW

Downlink: 145.875 to 145.925 MHz USB/CW

Indian Beacon: 145.859330 MHz CW

Dutch Beacon: 145.860 MHz 12 wpm with CW message

Mode and Antenna Polarization:

V: LHCP

U: RHCP

http://www.amsat.in/hamsat.htm

CO-56 CUTE-1.7

Catalog number: 28941

Launched: February 21, 2006

Status: Constant Carrier only 437.3850 MHz CW

Callsign: JQ1YPC

http://lss.mes.titech.ac.jp/ssp/spacerium/cute1blog/

CO-57 CubeSat

Catalog number: 27848

Launched: June 30, 2003

Status: Operational

Beacon: 436.8475 MHz CW

Telemetry: 437.4900 MHz AFSK 1200 bps

Callsign: JQ1YGW

http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

CO-58 CubeSat

Catalog number: 28895

Launch Date: October 27, 2005

Status: Operational - CW Beacon only: 437.4250 MHz AFSK 1200 bps

Callsign: JQ1YGW

http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

PO-63 PEHUENSAT-1

Catalog Number: 29712

Launch Date: January 10, 2007

Status: In Orbit

Uplink/Downlink: 145.825 MHz FM

Voice Recorder: 145.825 MHz FM

Educational projects, not issued with an Oscar number.

CAPE1

Launch Date: April 17, 2007

Status: In Orbit

Downlink: 435.245 MHz 9600 bps FSK AX.25

CP3

Launch Date: April 17, 2007

Status: In Orbit

Downlink: 436.845 MHz 1200 bps FSK AX.25

CP4

Launch Date: April 17, 2007

Status: In Orbit

Downlink: 437.325 MHz 1200 bps FSK AX.25

Libertad-1

Launch Date: April 17, 2007
Status: In Orbit
Downlink: 437.405 MHz 1200 bps AFSK AX.25

GENESAT-1

Catalog Number: 29655
Launch Date: December 16, 2006
Status: Operational
Telemetry Beacon Downlink: 437.0670 MHz AFSK 1200 bps
http://www.crestnrp.org/genesat1/ahc.html

INTERNATIONAL SPACE STATION – the ARISS project

Catalog number: 25544
Launch date: November 20, 1998
Status: Operational
Current Mode: Occasional Voice/packet Digipeater
Expedition 15 crew:
Commander: Fyodor Yurchikhin RN3FI
Flight Engineer: Sunita Williams KD5PLB
Flight Engineer: Oleg Kotov
Digital/APRS:
Worldwide packet uplink: 145.990 MHz FM
Worldwide packet downlink: 145.800 MHz FM
Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM
SSTV TESTING: watch for updates on the BB.
Worldwide Reported Downlink: 145.800 MHz FM
Crossband Repeater:
Repeater Uplink: 437.800 MHz FM
Repeater Downlink: 145.800 MHz FM
Mode and Antenna Polarization:
V: Linear
U: Linear
Callsigns:
German: DP0ISS
Russian: RS0ISS
RZ3DZR
USA: NA1SS
Packet Mailbox: RS0ISS-11
Packet Keyboard: RS0ISS-3
Digipeater callsign: ARISS
Official ARISS Webpage: http://www.rac.ca/ariss
ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines/

Future goodies.

Phase 5a Mars Mission

Proposed Launch Date: 2009 or 2011
Status: Design Phase
http://ticket-to-mars.org/

PHASE 3E

Proposed Launch Date: Late 2007
Status: Under Construction
http://www.amsat-dl.org/p3e/

AMSAT-Eagle

Proposed Launch Date: Early/Mid 2009
Status: Design Phase
http://www.amsat.org

ar

TET-EMTRON
Antenna Manufacturers

New
Tet-Emtron Vertical Range

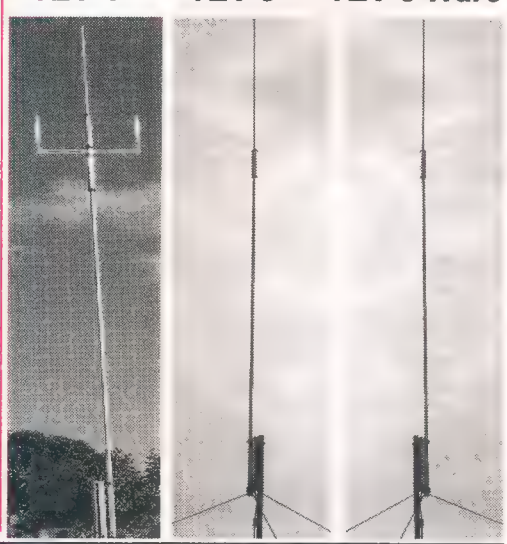
New Tet-Emtron Vertical Range

- All Aluminium with Stainless steel hardware.
- No adjustment needed to main antenna.
- Light.
- Free standing—no intrusive guy wires.
- 1 kW PEP power rating.
- Can be ground mounted or elevated.

The new TET-Emtron Vertical range is designed with ease of use in mind. Tuning is done by the radials when the antenna is in its final position (where possible).The radials can either lay on the ground, be buried or hang from the elevated antenna. The antenna comes with a set of radials that has a resonant radial for each band. Further sets can be ordered from TET-Emtron if desired.

See the web site for more info and a complete dealer list.

TEV-4 TEV-3 TEV-3 Warc



Antenna	TEV-4	TEV-3	TEV-3 Warc
FREQUENCY	7, 14, 21, 28 MHz	14, 21, 28 MHz	10, 18, 24 MHz
ELEMENT HEIGHT	4090 mm	3800 mm	5025 mm
FEED IMPEDANCE	50 ohm	50 ohm	50 ohm
Max. RADIAL LENGTH	10.7 metres	5 metres	7.5 metres
SWR	1.5 or less	1.5 or less	1.5 or less
POWER RATING	1 kW	1 kW	1 kW

40 Blackburn Street
STRATFORD
Victoria 3862 AUSTRALIA
Ph: 61 3 5145 6179
Fax: 61 3 5145 6821
ABN: 87404541761
www.tet-emtron.com
Email: rawmar@hotkey.net.au

CENTRAL COAST FIELD DAY

WYONG NSW - SUNDAY 17 FEBRUARY 2008

Once again the largest and longest running amateur radio field day in Australia is being held at Wyong on the NSW Central Coast.

Commencing at 9.30 am, the day will feature the major radio equipment importers in Australia and the State's main retailers.

There will be exhibitions by many clubs and groups.

As usual there will be a large flea market area available for car boot sales.

Entry: Adults $10.00 each
Children (under 12) FREE
Gates open 6.00 am for parking and traders admission. Trading and exhibitors area opens at new time of 9.30 am.

Plenty of on-site parking is available before the exhibitors and traders area is open.

Venue: The Field Day is held at the Wyong Race Course, Howarth Street, which is off the Old Pacific Highway, Wyong. Follow the arrows to the site or seek info from our info and talk-in service. The Wyong station which is serviced by trains from Sydney and Newcastle is 5 minutes from the venue. Rail bus services may replace some trains.

Seminars: Throughout the day commencing at 10.00 am a series of seminars on a range of subjects will be conducted with two seminars focusing on D-Star.

Other events: Other activities such as fox-hunts will be held throughout the day

Info and talk-in: On both the Saturday afternoon / evening and Sunday morning an information and talk-in service will be provided on the club's 2 metre repeater, 146.725 MHz using the call sign VK2AFY/P.

D-Star: A major feature of the day will be the NSW launch of D-Star. ICOM Australia will be establishing a working D-Star repeater at the venue and will have a fully operational system on display with their experts available to discuss all aspects of this new medium. All the new D-Star radio equipment will be on display and available for purchase from several of the retailers attending.

Raffles: Throughout the morning a raffle for valuable donated prizes will be conducted by the club.

Displays: In addition to the radio displays, there will be a Craft Display for the YL's and a woodworking display.

Catering: Free tea and coffee will be available in the new "chat area" on the second floor of the stand. Hot and cold food will be available from two outlets in the site on the day with the bistro area opening early.

The Central Coast Field Day is conducted for amateur's radio and electronics enthusiasts by the Central Coast Amateur Radio Club Inc.

Contact fieldday@ccarc.org.au or Phone 02 4340 2500 for further information .

DX – News & Views

John Bazley VK4OQ
P.O. Box 7665, Toowoomba Mail Centre, QLD 4352.
Email: john.bazley@bigpond.com

Well 2007 certainly ended on a high note from a Dxing point of view. The promise of activity from Bouvet – 3Y0E, the announcement by ARRL of an 'all time new one' FJ Saint Barthelemy Island and activity from Palestine E4.

NEW DXCC ENTITY. The ARRL DXCC Desk is pleased to announce the addition of St Barthelemy (FJ) to the DXCC List, making the island entity number 338 with an effective date of 14 December, 2007. Cards with contacts dated December 14, 2007 or after will be accepted for DXCC credit. New card submissions for St Barthelemy will not be accepted until January 1, 2008 in order to allow time for administrative adjustments.

The ARRL DXCC Desk has also approved all of UA4WHX's third DXpedition. This was his African, Middle East and Indian Ocean junket, which took place between 2005 and 2007. The following calls are good now for DXCC: 3DA0VB, 4K0VB, 4L0B, 5H3VMB, 5R8VB, 5X1VB, 5Z4/UA4WHX, 7P8VB, 7Q7VB, 9J2VB, 9U0VB, 9X0VB, A25VB, C91VB, D20VB, D60VB, J20VB, OD5/UA4WHX, ST2VB, V51VV and Z2/UA4WHX. Vlad and at least one friend have begun to hand write confirmations, which are now beginning to show up in mailboxes. Several Russian DXers have already received their QSLs. Remember patience is needed as he worked around 310,000 QSOs!

FJ: Saint Barthelemy Island. This operation by Martti OH2BH and Olli OH0XX used the callsign FJ/OH2AM by both operators to avoid duplicate contacts. They had three verticals on the beach for 17, 20 and 40 meters CW and SSB. QSLs should be addressed to OH2BN. Further interesting detailed information is available on http://www.dailydx.com/barthelemy.htm

The FJ and E4 operations have highlighted the effectiveness of CW under poor band conditions (Particularly the FJ operation when conditions between St Barthelemy and VK were very poor indeed – a point realised by Martti and Olli who on 40 metres took several standbys for VKs only, allowing a few of us to work them, when under normal circumstances, we would not have stood a chance of breaking the European pile up.) Similar standbys were also made by the E4 boys. So, it does appear that at long last Dxpeditions are realising that VK & ZL do have, at times, problems working the long haul DX. Another interesting point of both operations was staying on one band – on one mode – for 24 hours. You knew that at some time conditions would 'peak' even if it was only to S3!!! The FJ in particular peaked on 40 when the propagation programmes reported 'no opening'!

5T: DL7ZZ is planning a DXpedition to Mauritania next year. The group, consisting of Rich DK8YY, Rene DL2JRM, Ralf DL3JJ, Ingolf DL4JS, Dan DL5SE, and Andi DL7ZZ will be in the capital Nouakchott, near the Atlantic Sea, between March 16th and 30th. They will have enough space for their antenna systems, especially for the low bands. Plans are to have three stations, two with amplifiers. They will have a V160 vertical for 160 metres and a V80 vertical for 80 metres. Two phased verticals will be installed for 40 metres. Two beams will be used for 10-28 MHz, plus a ground plane for the digital station. A Web page is being setup for this operation at www.5t2008.de This will include an on-line log search, which will be updated daily via the Internet or Pactor. The team is looking for financial contributions. You can email them at info@5t2008.de QSLs for this operation can go via the bureau or direct via DH7WW, Ulrich Moeckel, Muldenstr. 1, 8304 Schoenheide, GERMANY.

3B8: Dom M1KTA will be in Mauritius as 3B8/M1KTA from March 1 to 16, 2008. Plans are to be active on most of the HF bands, mostly on the digital modes and SSB. He plans to participate in the Commonwealth Contest.

YJ: Trent VK4TI is considering a trip to YJ0 in March, 2008. He asks for operators interested in a week or two of DX from a good contest location to contact him.

JD/M: Masa JA6GXK was heading back to Marcus Island (Minami Torishima) from December 12th to 27th. He took with him a new FT-2000D with 200 watts. Masa planned to erect several antennas for the low bands including a 160 metre vertical and 80/40 duo band dipole. He was operating as JD1BMM mostly on the low bands. Please remember this was not a DXpedition but he was QRV in his spare time. He prefers QSLs go via the JARL QSL bureau, however if you need a direct card please include IRC. Do not send green stamps. The address JD1BMM (not JA6GXK) on QRZ.COM is the correct route. The JD1BMM QSL is the standard size of a JA QSL (15cm x 10cm) so make sure your self addressed envelope (SAE) can handle this. Masa also plans to be QRV from Marcus Island in late February through mid-March 2008.

V4: Mike W1USN, Bob AA1M, and Scott W1SSR, will be operating from St. Kitts (V4) starting February 28 and into March 2008. They will be using CW, SSB and PSK on 160 to 10 meters. QSL via CBA.

SOUTHEAST ASIA TRIP: Pete SM5GMZ will be back to Thailand, Cambodia and East Malaysia from January through April. His work will come first, but he will be active on the amateur radio bands as much as he can in his spare time. Expect him to operate as HS0ZFI, XU7ADI and 9M6/SM5GMZ. Activity from Brunei is also being planned. QSLs via home call, direct or bureau.

HQ8R is the Swan Island (NA-035), Honduras, callsign for an operation March 15-23, 2008. The operators will be WQ7R/HR9, KC4CD/HR2, HR2DX, HR2DMR, HR7REA, HR2J and HR2PAC. They plan to operate two phone stations, one CW station and one digital modes station on RTTY and PSK31, a total of four stations. The 10 operators will be on 160-10 m. They have a Web page at www.hondurasdx.com QSL via HR2RCH, Radio Club de Honduras, P.O. Box 273, San Pedro Sula, Cortes, HONDURAS.

As reported earlier, **Wilbert ZL2BSJ** will be moving to The Netherlands. He has received his new call. It will be

continued on page 46

WIA DXCC Standings January 2008

(337 entities)

Mal Johnson VK6LC

Callsign	Countries
DXCC Ex.(337) Phone	
VK4LC	337/384
VE6VK	337/374
VK5WO	337/370
VK6LK	337/362
VK3AMK	337/356
VK6NE	337/353
VK3QI	337/351
VK3AKK	337/350
VK2FGI	337/343
VK3DYL	337/343
VK3SX	337/343
Honour Roll(328)Phone	
VK4UA	336/371
VK6HD	336/362
VK7YP	336/341
VK3EW	335/341
VK3TZ	335/339
VK1ZL	334/338
VK2AVZ	333/344
VK6APK	333/338
CT1EEN	332/336
VK4SJ	329/331
VK3EUZ	329/330
General listing: Phone	
VK3YJ	327/333
VK6ABS	327/327
VK2UK	323/328
VK4LV	320/322
VK6LC	317/319
VK6RO	313/320
DL2AWG	309/309
PY2DBU	308/315
VK4AN	304/311
VK4EJ	302/304
VK4QO	301/306
VK3KE	298/301
VK3PA	298/299
9V1RH	297/303
JA3EY	296/300
VK2CSZ	294/297
DL1TC	294/295
VK3DU	292/301
VK2CA	292/292
VK7TS	285/286
VK6ANC	286/290
VK4BAY	287/290
VK3JMB	285/285
VK3UY	264/266
JA7MGP	260/260
VK2XH	257/257
DL3ASJ	256/256
VK8NSB	255/255
VK8DK	253/254
DL6MRS	252/252
VK6DU	249/252
VK2FHN	246/246
VK2AU	235/235
VR2XMT	235/235
VK4DMP	227/228
UA6LDD	225/226
VK3DVT	206/209
VK6RZ	203/206
VK7JAB	198/198
VK2RO	176/178
VK2EJK	176/176
9A2KL	172/175
VK6EH	170/170

Callsign	Countries
DL9UBF	165/165
DL6USA	162/162
VK5EMI	160/160
VK7LUV	160/160
SV1EOS	157/157
JA6KTY	156/156
VK6HZ	151/151
VK2SPS	143/145
VK2QV	141/141
VK3JXO	141/141
VK3DQ	138/152
VK8LC	138/138
OK1ZSV	136/136
VK4FNQ	134/134
SV1XV	130/131
WA5UA	128/128
VK4VIS	127/129
VK5ATU	126/128
VK6ZAI	125/125
CU3AAT	125/125
SV1UT	123/123
DD2MON	110/110
XV2LC	110/110
VK3CML	109/109
VK9RS	107/107
VK6ISL	106/106
AX4EJ	105/105
8Q7LC	103/103
SV1GYG	102/102
SV1FTY	102/102
RA3NS	102/102
VK5JAZ	100/100
VK2HOT	100/100
HS1NGR	100/100
DXCC Ex.(337)CW	
Position Vacant	
Honour Roll (328) CW	
VK6HD	336/357
VK3QI	336/348
VK5WO	335/351
VE6VK	333/360
General listing: CW	
VK6RZ	324/329
VK3AKK	320/325
VK4XA	306/333
VK4LV	301/308
9V1RH	297/303
VK4AN	296/302
CT1EEN	294/294
VK6AJ	292/304
VK6MK	249/252
VK3DQ	243/270
RD3AF	233/233
VK3KE	224/224
VK6RO	221/223
VK7TS	219/219
VK3PA	215/216
DL7PA	203/203
VK2AR	184/187
VK2GR	181/188
PY2DBU	181/183
VK4CXQ	174/174
DL8UVG	171/172
SP9ADV	168/171
DK6AP	168/168
DL6USA	165/165
VK4UA	151/164
VK3AMK	150/152
DL1TC	133/133
DL6UGF	126/126
VK6DU	125/127
DJ4BG	121/212

Callsign	Countries
T94VT	108/108
9A2KL	103/103
DL3GDS	102/102
SP9FY	100/100
VK6LC	100/100
DXCC Ex. (337) Open	
VK4LC	337/384
VE6VK	337/382
VK5WO	337/374
VK6HD	337/364
VK3AMK	337/356
VK3QI	337/352
VK3AKK	337/350
VK3SX	337/343
Honour Roll (328) Open	
VK4UA	336/373
VK3EW	335/341
VK3OT	334/348
VK2AVZ	333/344
CT1EEN	333/337
VK3UY	333/336
VK6RZ	330/336
PY2DBU	328/343
General listing: Open	
VK6RO	327/334
VK4AN	325/333
VK4LV	325/333
VK2UK	323/328
VK6LC	318/320
VK4DV	316/331
VK3KE	303/306
DL1TC	302/303
VK3PA	298/299
VK7TS	295/296
PY2DBU	294/298
VK2CA	291/291
VK6ANC	288/292
9A2KL	280/283
UA6LDD	279/280
VK6DU	277/280
VK8NSB	256/256
VK3DQ	255/284
VK6MK	255/258
VK2FHN	249/249
DL8UVG	228/233
DL9UBF	206/208

Callsign	Countries
DL6USA	201/201
SP9ADV	200/203
VK2AR	196/199
VK2GR	184/191
VK4CXQ	179/179
DL6UGF	161/161
SV1EOS	161/161
VK5ATU	158/160
VK3VB	153/155
VK6HZ	151/151
VK3JXO	146/146
VK2SPS	144/145
SV1XV	142/144
ON5SPA	127/127
VK2WL	124/126
VK5DC	117/118
N0MSB	117/117
VK9RS	111/111
VK2AJE	109/109
OE1HMC	105/105
UA0IGV	103/103
VK2AWD	102/106
VK5CO	100/106
VK5GX	100/101
VK1AI	100/100
RA3BZ	100/100
DL1APX	100/100
General listing: Data	
VK3EBP	253/255
VK3KE	205/205
VK4AN	151/151
DL4ARJ	120/120
ON5SPA	111/120
CT1EEN	110/110
VK3AMK	100/102
Gen-listing 6 m Open	
VR2XMT	154/154
VK4FNQ	141/141
CT1EEN	110/110
VK6JQ	103/104
VK4CXQ	101/101
Gen-listing: Satellite	
VR2XMT	112/114
Gen-listing 2 m Open	
Position Vacant	
General listing: SWL	
DE2DAD	100/100

WIA Data files are now linked to this page i.e. 110/110 denotes no deleted entities

110/112 denotes 2 deleted entities.

WIA financial members can now claim one (1) free award certificate per membership year including two (2) DXCC updates only.

If your callsign is not listed it means you have not updated in the last 5 years or your WIA membership has lapsed. To re-join the WIA DXCC program you must be a financial WIA member and a complete new DXCC submission is required.

The next closing date for DXCC Standings is 30th June, 2008 with a revision to "add FJ Saint Barthelemy separation dated 14.12.2007. Entities increased to 338/58".

Awards information and downloadable files are available on our WIA website: http://www.wia.org.au/awards/ or email to: awards@wia.org.au
Mail: WIA Awards Manager PO.Box 196. Cannington. Western Australia. 6987.

ar

Five Examples of Having Fun with

Have you ever thought how you could access the Internet via amateur radio?
What would it be like to hear crystal clear communication via handheld or mobile city to city, country to country?
Would you like to send SMS type with D-STAR to track position data, find your friends or check their progress on La
Maybe you are part of WIRES needing to integrate voice and live images real time — send voice, files and pictures

Application 1

Digital voice (DV mode)

Analog audio is modulated to a digital signal and transmitted in the digital mode signal by the D-STAR radio.

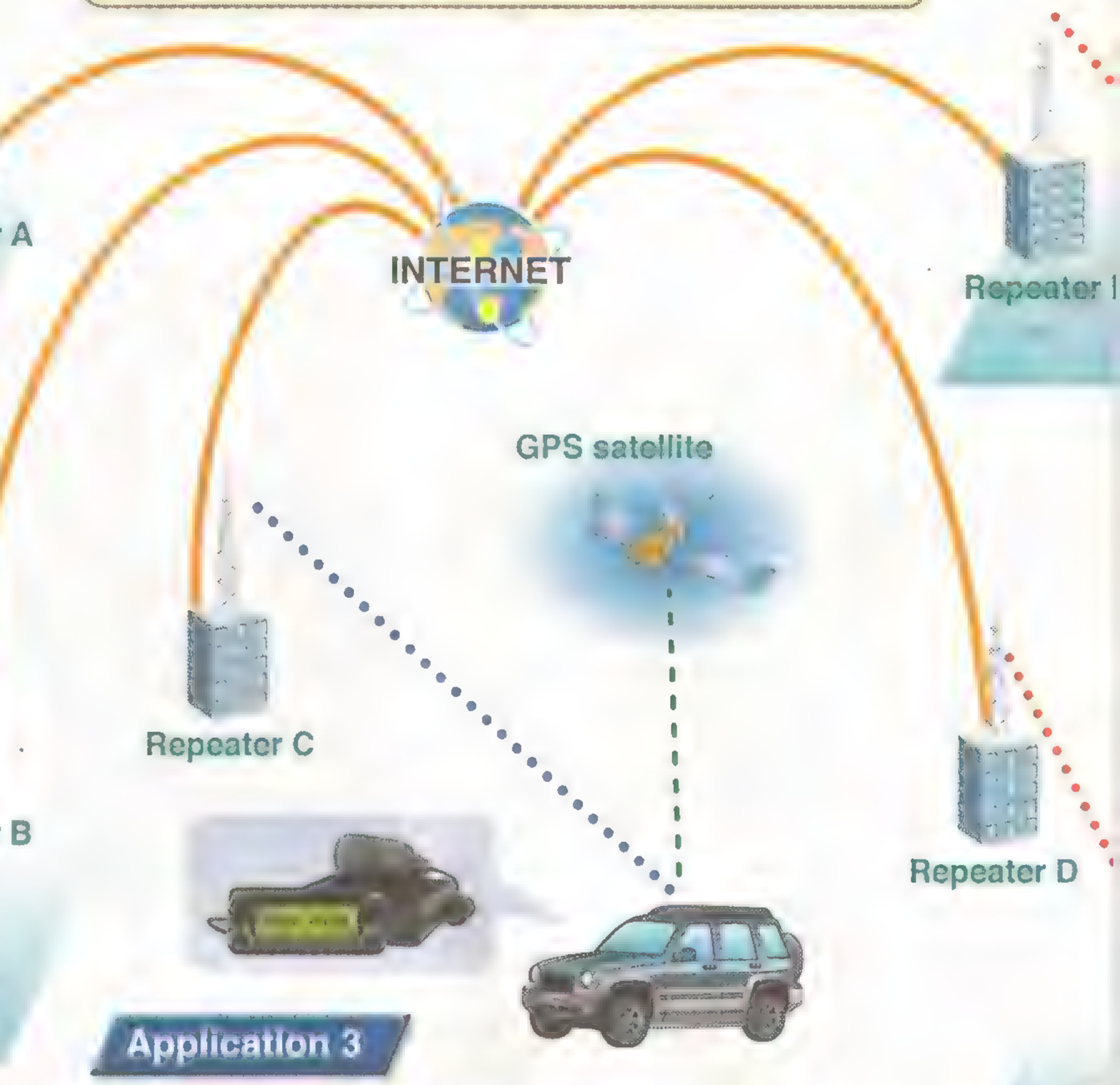
Application 2

Short data message (DV mode)

Call sign identification and short data messages are available.

Internet connection*

The Internet gateway allows linking of D-STAR repeater sites over the Internet. You can uplink to your local repeater and downlink from a remote repeater, even from a foreign country!



Application 3

GPS tracking (DV mode)

With a GPS receiver connected, you can send your current position, and receive, process and display position data from the received station. (IC-2820H**) Beacon to the DPRS/APRS® Network, and you'll be on the map with "UI-View®.

Internet
DV mode (4.8kbps)
DD mode (128kbps)

* Some restrictions may apply depending on specific countries' regulations.
** With optional UT-123 D-STAR PCB and GPS .

ICOM Demand Reliability and Performance, Insist on ICOM!
For more informatio
or find your local au

D-STAR

...w ®?
...al time at 128Kb/s, Enter D-Star!

Application 5

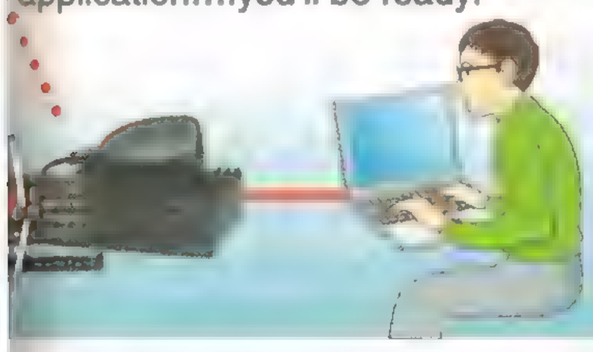
IP camera (DD mode)

You can transmit live images in DD mode and watch real-time images from a remote location.

Application 4

Internet access (DD mode)*

In DD Mode at 128 Kb/s you can access the internet to other D-Star zones in Australia or anywhere a D-Star system is connected even Kazakhstan! Connect a PC to an ID-1 and you can browse D-Star system websites, local info-kiosks, check e-mail, FTP...just about anything. D-Star is open and non-proprietary, just wait for the next application....you'll be ready.



...ll ICOM Australia on (03) 9549 7500
...ised dealer at www.icom.net.au

Frequently Held Myths About D-STAR

GET THE FACTS!

1. "D-STAR only works on 1.2 GHz."

FACT

Low-speed DV D-STAR voice and data works just fine at 144 and 430 MHz. 1.2 GHz supports the bandwidth needs of high speed DD data. Choose the technology that satisfies your needs.

2. "There's no difference between D-STAR and packet"

FACT

Even D-STAR's lowest speed is competitive with the highest-perfromance packet systems available today. D-STAR's simultaneous digital voice and data at 4800 bps is beyond the capability of any packet technology. Hi-speed D-STAR systems are ten times faster than the highest packet speeds.

3. "D-STAR is no different from IRLP or Echolink®"

FACT

VOIP systems like IRLP and Echolink® are only capable of routing voice signals. They don't support data exchange at any speed. Calls targeted to a specific user are not possible by any amateur technology except D-STAR.

4. D-STAR is just a digital party line!"

FACT

The ability of D-STAR repeaters to route data and digitized voice worldwide sets it apart from a single party line. Sophisticated D-STAR controllers and gateways implement modern telecommunications functions in an amateur package.

5. "D-STAR is a replacement for broadband home Internet"

FACT

Truly a fantasy! D-STAR can connect a user to the internet, true, but all of the amateur radio restrictions on commercial activity still remain in place. D-STAR will provide the tools for a lot of great amateur innovation, but it's not intended to replace Internet providers.

6. "D-STAR won't work with APRS®"

FACT

Except for the ID-1, All D-STAR radios can do DPRS when connected to a GPS receiver. The exciting thing is, with D-STAR being an open protocol, software experimenter, Pete Lovell AE5PL, has written a program that interfaces DPRS to APRS® and sends the converted APRS data to your APRS IS gateway. This means you can see all the new D-STAR stations on UI-View®. With the "D-STARTNC2" application, any D-STAR repeater with a gateway can send DPRS □APRS data to the APRS Internet system. The D-STAR team will be implementing this interface in Australia.

7. "I'll be locked into Icom equipment forever."

FACT

While Icom is the first manufacturer to support D-STAR, any manufacturer or amateur can use the JARL standards to create equipment – transceivers, repeaters, and gateways – compatible with the D-STAR system. As the D-STAR system grows, look for other manufacturers to join the fun.

ALARA

Christine Taylor VK5CTY

Greetings for 2008

The New Year is upon us. ALARA wishes all our members and their families a very Happy 2008. Did Father Christmas bring you all the radio goodies you were hoping for? Hopefully the answer is yes. If it is not, well there is always next year.

End of year happenings for 2007

In VK5, the November Buy and Sell is always a big event in the ALARA calendar. We 'man' the food stall and have a great opportunity to chat as well. As usual there were plenty of helpers for the stall and plenty of time to take a break for some socialising.

The photo shows some of us that day and included our "VKthrive" member, Marilyn VK3DMS who loves to come down for the weekend to Adelaide, which is almost as near geographically as is Melbourne.

In VK3, the monthly luncheons are continuing and growing in interest. A photo of the November gathering illustrates this well. There are also regular Thursday evening skeds on VK3REC 2-metre repeater at 8.30 ESST, so even if you cannot attend the luncheons, do join in the local chat sessions. Contact Jean VK3FJYL for more information.

Colossus loses the code breaking race

For the many people interested in the code-breaking efforts accomplished at Bletchley Park (Shropshire) during WW2, this item reprinted from the BYLARA (UK YL group) newsletter will be of interest.

The rebuilt Colossus Mark 2 at Bletchley Park lost the race to decipher an encoded Lorenz transmission from Germany.

Hourly transmissions commenced on the morning of Thursday November 15th but propagation was poor.

Despite the best efforts of the Milton Keynes Amateur Radio Society, clean copy was not received until after 5.00 p.m. local time.

The Bletchley team loaded the message into Colossus on Friday morning, and managed to decode it by lunchtime. But they were beaten to the punch by German amateur Joachim Schuth. He received good signals much earlier and used his own specially-written software.

News of the decode reached the Bletchley team on Thursday evening. The BBC website reports on this event at: http://news.bbc.co.uk/1/hi/technology/7098005.stm

The January issue of Radcom contains a report on the Colossus Mark 2 and the cipher challenge.

What a shame that propagation was poor, rather than that poor decoding affected the result. The one thing we as amateurs cannot control is, as always, the quality of the propagation at any particular time. Nevertheless, congratulations are due to Joachim Schuth for his achievement. Modern computing and software skills have made many things possible. We tend to take it all for granted, don't we?

Do you remember the attempt in 2001 to reproduce the very first Marconi transmission across the Atlantic from Poldhu in Cornwall to St Johns in Newfoundland? That was ruined by the modern world, not propagation. There is so much electronic 'noise' in the world today that the tiny signals sent across the ocean in the experiment were swamped.

Did you participate in the Canadian Challenge?

If you did, and you made more than 40 YL contacts – by any mode, CW, voice, HF, VHF, Echolink, or Packet, - during the year 2007, you are eligible for a certificate.

Just submit the list of contacts and the mode, and send it to Kathy VE3GYL either by snail mail at Kathy Steels VE3GYL, 444 Jellicoe Crescent, London, Ontario N6K 2M5, Canada or by email at ve3gyl@gmail.com

The contact had to be made between Jan 1st 2007 and Dec 31st 2007 and the list of contacts has to be submitted before March 31st 2008.

We hope you enjoyed making the contact and will continue to talk to those YLs for many years. That is certainly the hoped for aim of the Challenge.

A clever idea and an interesting one. Thank you CLARA.

(Editor's note: Christine has advised that discussion has occurred regarding an extension of the Challenge period so that the required number of contacts can be made. Check for the latest news via the ALARA Net.)

Some of the ALARA YLs: Tina VK5TMC, Christine VK5CTY, Marilyn VK3DMS, Jenny VK5ANW (sometimes portable VK3)

The VK3 girls

National FM ATV 'Grand Slam' attempt

Dan Joyce VK2GG

On the weekend when the heads of governments were gathering in Sydney for the APEC Summit, two ATV teams were venturing west for an attempt on five or even six National FM ATV records. If we had set up microwave dishes in Sydney that weekend, we would have been arrested as possible terrorists!

Between us, Jack VK2TRF and I already held records on three bands: Jack and I for 6 cm and 3cm, and Jack and Nick VK2ZTY for 13 cm. How would 23 cm, 9 cm and 1.2 cm go added to those, along a 240 km near line of sight path? Going begging was a possible 'Grand Slam' attack on four existing national FM ATV records, and the possible setting of two more, including 24 GHz!

Early on Thursday morning, Jack VK2TRF and Garry VK2UNI headed for Mt Ginini near Canberra. Dan VK2GG headed for Mt Canobolas near Orange, in the inner west of NSW. The trip had been the result of 12 months planning. An earlier survey trip to Mt Canobolas had found a near perfect location with good clear air southward. A back-up location had been catered for, as well as a second back-up location, ear-marked for the relatively untried band, 24 GHz. We had, of course, to build transmitters and feeds, test them across other test paths, and to cope with unforeseen events like one exciter failing a week prior to our departure, and two video invertors not producing acceptably stable video even on the day. Also, we had failed to achieve two-way contact on two bands!

As I did some preliminary testing from Mt Canobolas, some VK1 hams on the Mt Ginini repeater were surprised that I was getting into Canberra from 240 km away on a handheld!

Photo 1: Dan VK2GG and Peter VK2YGM work on the 10 GHz antenna.

Early on the Friday morning, we proved that Mt Ginini was far too populated by trees to be useful on any band other than 2.4 GHz. P2-3 pictures were received on the 241 km path. Jack, Garry and Bob VK2MRP then proceeded to Mt Coree, where conditions were more favourable, and all 5 FM bands from 23 cm to 3 cm were able to be logged with pictures on all bands being at least P4. Dan had been joined at Mt Canobolas that morning by Dave VK2TDN and his XYL. As well as assisting on ATV, some 23 cm FM voice was being successfully experimented with from several locations. Dave has a varactor diode transverter, which works very well on FM. Jack and Garry were also joined by Bob VK2MRP, who said he thoroughly enjoyed himself. Bob obviously likes Tim-Tams – the obligatory ATV snack!

The following day, Jack VK2TRF, Garry VK2UNI and Bob VK2MRP drove to Boorowa, which is almost exactly in the same line of fire as Mt Coree, but is only 120 km from Mt Canobolas. 24 GHz ATV was attempted, but no pictures were seen. There were storms in the path, and rain was threatening at Canobolas. We decided to try again on Sunday. Jack had found that their access up to the top of the hill at Boorowa was blocked by a chained and padlocked gate. Fortunately, the chain was one which could be lifted over the post!

What a beautiful day was Sunday 9 September! Wall to wall blue sky, with

Photo 2: The VH2TRF 2.4 GHz station, on Mount Ginini.

no clouds on both ends of the link. We set up for 24 GHz ATV – nothing for 4 hours! Peter VK2YGM and new wife Irene had joined me at Canobolas. We had been both watching the same cloud in the centre of the path from each end - that was weird! Jack actually was able to see the TV towers on Mt Canobolas, such were the clear conditions. The humidity was checked via internet, and it was discovered that it was dropping from 70-80% to something like 50%; looking promising! Still nothing until about one o'clock, when Jack announced that he was receiving our carrier full-scale. Wow! Virtually P5 pictures were then received, with conditions apparently worsening for the reception on Canobolas. P2-P3 pictures failed to dampen our elevated spirits! We had done it, not only on the five bands from Coree to Canobolas, but on 24 GHz, which had proved a very tricky band. Our dishes had a beamwidth of a little over one degree! Rain makes reception almost impossible, and humidity also attenuates the signal.

Grand Slam?

More like an ATV Marathon! Many thanks to Dave VK2TDN, Garry VK2UNI, Bob VK2MRP and Peter VK2YGM. Where next? More ATV on 47 GHz? EME? Narrow band?

Equipment used was:

- 23 cm Tx: Mini-Kits exciter, 50 W PA, 16 el Yagi; Mini-Kits 20 W PA into slot/plate (splash) fed 1.2 m dish.
- 23 cm Rx: G1MFG receivers with G6ALU ATV Controller, Mini-Kits (VK5EME) pre-amp.
- 13 cm Tx: G1MFG exciters, 20 W

Photo 3: Jack VK2TRF at the 24 GHz station

Photo 4: The Mini-Kits 1.2 GHz transmitter.

Photo 5: The plate/dipole feed for 3.5 GHz.

Photo 6: The VK2GG signal from Mount Canobolas, as received by Jack VK2TRF on Mount Ginini.

Photo 7: Jack VK2TRF with his Range Rover and assorted equipment on Mount Coree.

PA, gridpack antenna, modified Conifer feed.

13 cm Rx: G1MFG receivers, home brewed signal strength meters.

9 cm Tx: Mini-Kits (VK5EME) exciter with VK5EME 3X multiplier into 40 W Toshiba PAs, slot/plate (splash) fed parabolic dishes.

9 cm Rx: C Band extended LNB (Mini-Kits) into G1MFG receivers, G6ALU controller.

6 cm Tx: A/V sender into 8W PA; 1.2m dish fed with penny feed. Other end same exciter/PA with modified gridpack antenna (30 dB).

6 cm Rx: A/V receiver (Jaycar) from same antennae.

10 GHz Tx: G1MFG exciter, DB6NT (Kuhne) X 4 multiplier, penny fed 1.2 m dish; other end same with 1 W DB6NT PA into 60 cm dish.

10 GHz Rx LNBs, G1MFG receiver, G6ALU controllers, penny fed dishes.

24 GHz Tx: Microwave Radio Gunn (50 mW) into 60 cm dish with penny feed.

24 GHz Rx: DB6NT (Khune) LNB with G1MFG receiver, G6ALU Comtech ATV controller, 60 cm dish with "penny feed".

ar

More than a fox hunt!

A big welcome and invitation for all to attend the 60th Urunga Radio Convention at Urunga. (Easter long weekend 22nd and 23rd March 2008)

From its early days where it started at the DOO MEE boat shed (where the Anchors Restaurant is now) by Peter Alexander VK2PA, Crieff Retallick VK2XO, and others, the convention is steeped in early history and has been run continually as a premier Fox hunting field day, Brian Slarke kept it going for many years with a small band of helpers, come along and meet your old friends, many still attend,

We hope to make the 60th Convention something special, Urunga is a beautiful place for that break away, so come along and enjoy our hospitality.

Check out the web page. http://users.tpg.com.au/goldy2/index.htm

Ken Golden VK2DGT
Sec. WIA. Urunga Radio Convention. Inc.

News from...

VK2

Tim Mills VK2ZTM
vk2wi@ozemail.com.au

Hello and greetings from VK2 for 2008. The notes for the December issue apparently missed the deadline so where applicable they will be included this time.

Clubs

The Blue Mountains ARC have just celebrated their 50th anniversary which included the special event callsign VI2BMARC50. On 9th February, they will hold a celebratory dinner. They hold weekly nets at 2000 with HF on Tuesday on 7120 kHz, November to March, and 3543 kHz, April to October; VHF on Wednesday, also at 2000, on VK2RBM 147.050 [+600 kHz with 123 Hz CTCSS].

This month is the annual Central Coast Field Day at the usual venue, the Wyong Racecourse, on Sunday the 17th. On the Saturday evening there is a dinner at the racecourse. Their first recorded field days were held in the 1930s with the 1931 event having a cricket match on the Wyong Racecourse. In 1932, there was a dinner with 150 in attendance. After WW2, they held some at the Gosford Sailing Club and the Gosford Showground before the move back to Wyong.

The Waverley ARS has a seminar planned for Saturday morning, the 23rd February to learn the tricks and tips of the VX-7R handheld. Registration by email vk2faln@vk2bv.org Their web site is vk2bv.org or phone contact to Simon VK2UA on 02 9328 7141.

The Taree and District ARC meet on the first Tuesday of the month in the library rooms of the Taree TAFE College, in Montgomery Crescent, at the western end of Victoria Street. The region has two permanently linked two metre repeaters, on which a net is conducted Monday at 1930 hours. Look for club callsign VK2FRE. Exams are available on request and the contact is Mark VK2AMS on 02 6551 0126 or email to vk2fre@wia.org.au Their web page is www.users.bigpond.com/darsoncomp/

The Illawarra ARS meet on the second Tuesday evening in the Industrial World Visitors Centre, Springhill Road, Coniston. The Society sponsor eight FM voice repeaters, as well as APRS digipeaters, packet BBS and Morse beacons. EchoLink node 326276 operates on VK2RBZ 147.300 and IRLP node 6018 is operational on the Coast Link Repeater Network. Details on their web site www.iars.org.au For club members, they have a free loan library of books, video and CDs.

The Oxley Region ARC recently acquired an enclosed car trailer which is being overhauled and fitted out for field operations and promotional aspects. Their general meeting is the first Saturday afternoon of the month and informal evenings on the second and fourth Fridays at the Port Macquarie SES building in Gordon Street. Start planning now for their annual field day on the June long weekend. Web site www.orarc.org

Summerland ARC has their AGM this month on the 10th. They also have exams scheduled for 9/10th February. Contact points for exams are by email at either draymont@nrg.com.au or iangray@ceinternet.com.au

Fisher's Ghost ARC meets on the last Wednesday of the month in Campbelltown. They have exams scheduled in conjunction with Liverpool and District ARC for early March. Check them out at www.fgarc.org

Snowy Mountains Amateur Club has a 2 metre SSB net – 144.150 MHz Saturday evening from 2030 to 2130 hours local.

Manly Warringah RS meet every Wednesday evening at the Warringah Volunteers Services centre at Terrey Hills. Details on the web site www.mwrs.org.au, or telephone the club on Wednesday evening on 02 9450 1746 or call on their 146.875 repeater.

The Hunter Radio Group resumes their Monday evening news net – VK2AWX – at 1930 hours with highlights from both VK1WIA and VK2WI. Their meetings resume this month on the second Friday evening. For exam assessments, contact Grahame VK2FA on 02 4954 8688.

HADARC resume their meetings for the year on Tuesday the 12th and then on the fourth and second Tuesday evenings. Their web site www.hadarc.org.au/ or call Neale VK2CNI on 02 9477 2061.

The Radio Veterans Group, who meet on the third Thursday morning, resume this month. They are now meeting at the VK2WI Dural site. St. George ARS have also resumed their monthly meetings for the year and this month was also their AGM.

With Easter next month do not forget the Urunga Convention over Saturday and Sunday. It will be the 60th annual event.

The ARNSW Homebrew Experimenters Group plans a display again at the Wyong Field Day. Pay them a visit. They meet on the first Tuesday at Parramatta, have a net on the third Tuesday evening on repeater VK2RWI 7000 and gather at Dural following the T&T on the last Sunday of the odd month.

ARNSW

Members of ARNSW are reminded that there will soon be a call for nominations for the next Council. Also the AGM is approaching. Dates had not been advised as these notes were prepared. All operation of ARNSW is now based on the Dural site. The old Parramatta contact points have been closed. The phone has been cancelled and the post boxes will not be continued when they come up for renewal in a couple of months. For your

Wishing health and prosperity to all radio amateurs for 2008

From the

Oxley Region Amateur Radio Club Inc.

Do not forget to book early for the Queen's Birthday Weekend in Port Macquarie, *June 7 & 8, 2008.*

Port Macquarie Field Days

Programme details soon in club news, broadcasts and the club web-page: www.orarc.org

records, the new postal address is P. O. Box 6044, Dural Delivery Centre, NSW 2158. The telephone is 02 9651 1490 into a message bank. The freecall number for country members remains 1 800 817 644. FAX is 02 9651 1661.

The next Trash and Treasure is scheduled for Sunday 30th March.

Operator provided slow Morse transmissions are made on Tuesday and Thursday evenings at 2000 local under the call VK2BWI on 3550 kHz. Automatic sent Morse from VK2WI on 3699 kHz outside broadcast hours.

VK2WI

The 23 cm repeater has been troublesome of late and is out of service while its future is considered. It has had a good innings. It was commissioned on the 12th November 1989 during a microwave field day at the Dural site. It is based on a pair of transceivers donated by DSE. Not a bad run for equipment that has been powered up for almost 20 years. The 40 metre AM service has been replaced with the callback SSB transceiver to overcome the AM getting into a control system. A more remote antenna and rerouted feed line is planned.

2007 VK2WI News Sunday morning and evening sessions have ended on a high note. There was just over 100 hours of transmissions with 6354 callbacks logged. An average of 130 callbacks for the two sessions; with the lowest day being 100 to the highest of 156. There were 51 morning transmissions resulting in 4753 callbacks, an average of 91, the lowest 73 to the highest of 116. The evening had 48 transmissions: fewer logged in but well used by those who missed the morning. 1601 callbacks, from a low of 19 to a high of 52. There is always a larger audience than the callbacks received. Reports by email are most welcome.

The Dural HF service on 5425 kHz USB has been issued a new call sign by the ACMA. This is VKE580 to help identify the Sunday Morning News transmission. This is a transmit-only service, as callbacks can only be received on amateur bands.

News for the broadcasts should be sent by email with a Friday deadline to arnews@tpg.com.au. The text of the VK2WI News can be found on www.arnsw.org.au

73 – Tim VK2ZTM.

60th Urunga Radio Convention 2008

The 60th Urunga Radio Convention will be celebrated this Easter 22nd and 23rd March 2008, Saturday and Sunday, with Fox Hunts and convention activities on both days, quizzes, raffles, trade tables available, pre loved gear, etc.

Why not make it a break from your busy lifestyle and slow down a bit at quiet restful Urunga – "where the rivers meet the sea", the longest running fox hunt convention in Australia.

The social gathering for the Saturday night will be in the Senior Citizens Hall. We hope to make this something special so do not miss out.

Come and meet some of your old friends, many still attend, a good time is always had by all.

This is the longest running Fox Hunting field day in Australia, from its small beginning at the Do Mee Boat shed and Ocean View Hotel (a good excuse for a rag chew) to the best and most cunning Fox Hunts, mobile and pedestrian, which have evolved over the years to the popular format we have today.

The Radio Convention is always well attended. All are welcome (see Ken VK2DGT at the convention).

The 2007 convention went off without a hitch, Adam Scammel VK3YDF winning the "Jack Gerard Memorial Award" and also the "Brian Slarke Memorial Award" overall for two days.

Venue: the Senior Citizens Hall, Bowra Street, Urunga.

Ken Golden VK2DGT
Sec. Urunga Radio Convention. Inc.
Email: krgolden46@hotmail.com
Ph. 02 66523177
Web: Urunga Radio Convention: http://www4.tpgi.com.au/goldy2/
(or search engine)

Fox hunt Results Urunga Radio Convention 2007

Saturday:

3.5 MHz.	1st	Brian Ackerly VK3YNG
	2nd	Chris Williams VK2YNW
2 m Peds.	1st	Adam Scammel VK3YDF
	2nd	Rodney Somerville VK2URK
Junior 2 m	1st	Laura Austin
	2nd	Cameron Williams
2 m mobile	1st	Adam Scammel VK3YDF
	2nd	Craig Martin VK2ZCM
2 m talk in	1st	Geoff Pages VK2BYY
	2nd	Adam Scammel VK3YDF

Sunday:

Urunga Scramble	1st	Graham Obrien VK2FA
40 m Fun event	1st	Geoff Pages VK2BYY
Junior 80 or 2 m	1st	Cameron Williams
	2nd	Laura Austin
2 m Mobile	1st	Chris Williams VK2YNW
	2nd	Adam Scammel VK3YDF
2 m Peds.	1st	Adam Scammel VK3YDF
	2nd	Brian Ackerly VK3YNG
2 m talk in Peds.	1st	Adam Scammel VK3YDF
Jack Gerard Memorial Award (3 events):		Adam Scammel VK3YDF
Brian Slarke Memorial Award (overall 2 days):		Adam Scammel VK3YDF

News from...

VK3

D-STAR is the star

Joe Chakravartti VK3FJBC

On the eve of the 2007 election, 23rd November, members of Melbourne's Eastern and Mountain District Radio Club had anything but politics on their minds. For the masses waiting for the doors to open at the Whitehorse Centre for the official launch of D-STAR, the big question was not Howard or Rudd, but rather whether they were going to win the jackpot and walk away with a brand new D-STAR radio.

The parking lot of the Nunawading Civic Centre was overflowing with cars; the rather well-appointed meeting room of the centre packed with well over 120 people waiting to hear about the new D-STAR technology, drinks and nibbles on standby, gallons of hot water for tea and coffee and cool drinks on the side, two screens and two laptops set up for presentations, three video cameras for capturing the moments of the evening, four in-house paparazzi hovering around, a couple of Icom ID-1 radios setup for a demo, a D-STAR ready Icom IC-2820H hooked up to a Diamond X-200 resting in the corner of the room.

The occasion - The official launch of "Digital Smart Technologies for Amateur Radio" (D-STAR) by Icom, to talk about the role and relationship between Icom and WIA, the proposed roll-out plan for deployment of this new technology to the Australian amateur radio market and finally to mark the beginning of the EMDRC's role as custodian of VK3RWN - the first D-STAR repeater in Melbourne. This was presented to the WIA by Icom and was setup by a team who had burned the midnight oil on many an occasion to ensure that device kept up with expectations.

The evening got underway with a quick welcome address by Club President, Bryan Pliatsios. who handed over to Paul Bannister, National Sales Manager for Icom. He talked about the developments that had taken place over the past year and the D-STAR repeater deployment strategy, product pricing and looking forward, i.e. the opportunity for Icom to work with WIA to establish a national network in 2008, music to the ears of all radio amateurs interested in the possibilities that D-STAR offers.

Ross Keogh VK3MY (aka-Slim), our antenna mast.

WIA President Michael Owen VK3KI was next on the podium to pay tribute to Icom's efforts and to acknowledge the exciting times ahead for all amateurs. He promised to keep it short as the "exciting" stuff was just ahead, referring to the practical demonstration that was to follow. Michael introduced Peter Willmott VK3TQ of Icom as "Captain D-STAR", a nickname earned by Peter due to his association with the D-STAR project.

Peter then presented an overview of the new technology with information about how the network had been embraced by the United States, Japan, Europe and other countries. He also talked about the challenges faced with setting up the repeater and acknowledged the assistance of several amateurs who worked with Icom to make it all happen. He took the opportunity to thank people in the D-Star installation team, Steve VK3JSR, Allan VK3FALL, Peter VK3TQ, Matt VK3FGIB, Robert VK3KRB, Richard VK3JFK and Cameron VK3MIR for their help in organising and installing the new D-Star repeater VK3RWN. Apparently, some members of the team worked well into the night on certain occasions. Also included in the thank-you list were D-STAR Team sponsors: Icom, AA Radio, JRD Communications, RFI Industries, Strictly Ham, G & C Communications and the WIA for their support with this project.

The arrival of Richard Hoskin VK3JFK marked the start of the "technical stuff". Richard, with extensive training and knowledge of the technology behind D-STAR, shared with the group the finer details of programming of the radios for usage on the network. He pointed out the subtle, but important differences of the new technology in comparison to existing technology. The audience learnt about how users could be "called" by programming their call signs into the rig, how to access the repeater, how to hang up and finally, how the "gateway" could be used for interstate and international contacts. The aspect of registrations on the D-STAR website was addressed and it was announced that registrations would now be possible on http://www.dstar.org.au/ for access to the gateway. The start of the D-STAR practical demonstration had the audience glued to the big screen, watching the feed from one of the three video cameras pointed at the screen of the IC-2820H. The

audience was able to relate to Richard's earlier commentary which tied in nicely with what was being done on the screen. A contact followed with John VK8HF in Darwin through the VK3RWN repeater and as the words "Welcome to Darwin" flashed on the screen of the IC-2820H from VK8HF, it marked the official launch of the D-STAR gateway in Australia. The highlight of the contact (besides the crystal clear audio) was Ross VK3MY holding the Diamond X-200 in his hand to help achieve the desired signal strength!

The long awaited EMDRC raffle bucket then made an appearance and one could have heard a pin drop as the ticket was drawn. It turned out that David VK3FUEL was the lucky winner of an IC-2200H with the rest of the crowd wishing that there were at least a dozen more (similar) prizes so that they were in with a chance of winning. Now David is probably hitting the books in order to do the big upgrade so that he can actually use the IC-2200H for D-STAR contacts.

Then came question time, after which everyone took the shortest route to the excellent spread at the back of the room.

Many coffees and eyeball QSOs later, an eventful evening for the EMDRC ended. A truly memorable one for the club history book.

Captain D-Star, Peter Willmott VK3TQ, with a demo in action

An excellent turnout – over 120 people

News from...

Amateur Radio Victoria News

Website: www.amateurradio.com.au
Email: arv@amateurradio.com.au
Jim Linton VK3PC

Hope you all had a good festive season and started off the New Year 2008 well. The Centre Victoria RadioFest Organising Committee has had its final meeting and announced that all is set for a bumper event at the Kyneton Racecourse on Sunday 10 February.

Since the main advertising occurred in Amateur Radio magazine in December there has been even more interest shown by individuals and groups wanting to participate.

The Australian Veteran Radio Society, Bendigo Astronomical Society and the Historical Radio Society of Australia have now joined the list which includes the Wireless Institute of Australia, WICEN (Vic), ALARA, FAMPARC, Scout Radio and Electronics Service Unit and the Royal Australian Corp of Signals Museum.

The program has several innovations this year. They include a Constructors' Cavalcade to showcase home-brewing and kit-building, an Antenna Measurement Range for 2 m, 70 cm and 23 cm on the centre of DX activity for those bands, and the National Launch of D-STAR.

There will also be an informal RadioFest Dinner on Saturday 9 February at the Kyneton Bowling Club, 61-79 Mollison Street Kyneton, from 7 pm.

More details about the family friendly RadioFest with its free children's face painting, playground and picnic area can be found at radiofest.amateurradio.com.au

Tickets go on sale at 9 am and the turnstiles open at 10 am. A hot breakfast is available from 8.30 am. Hot and cold food and drinks catered by the Kyneton CFA Auxiliary. Free tea and coffee available all day.

This is now Victoria's biggest event of its type, a collaboration involving Amateur Radio Victoria, the Central Goldfields ARC and Midland ARC.

Strong education activity

In his annual report, our Education Team Leader Barry Robinson VK3JBR has advised that in 2007, Amateur Radio Victoria had 17 assessment sessions, 12 weekend Foundation Licence classes and two Standard Licence Bridging Courses.

While the total candidates for the year exceeded 100, on par with the previous year, there was a reduction in Foundation candidates when compared with 2006.

Enrolments for the next Foundation Licence courses and assessment weekends on 16-17 February and 15-16 March are now being taken. Inquiries to Barry Robinson VK3JBR on phone 0428 516 001 or arv@amateurradio.com.au

In another development the education resources (get your licence) section on the Amateur Radio Victoria website has been expanded. There are now two online trial tests for each of the Standard Theory, Advanced Theory and Regulations.

Office reopening

The office at 40g Victory Boulevard, Ashburton reopens on Tuesday 5 February. It has for sale the 2008 Australian Callbook that contains a wealth of reference material essential for any radio shack.

Copies can be mail ordered by sending payment of $29. Payment by credit card can also be accepted via fax 9885 9298. Or they can be purchased over the counter for $22. The popular log books can also be purchased for $10 or by mail order at $13.

Eastern Zone Amateur Radio Club (Inc)

Chris Morley VK3CJK

2007 was a busy year for the club, with our regular monthly meetings well attended. Club members presented talks on a variety of topics, with the level pitched at enlightening our current and potential Foundation amateurs. In July, the annual GippsTech conference was held, as has been reported earlier in AR. At around the same time as the conference, two other significant tasks occurred.

Around a month before the conference, we decided to establish a new website, as we had been experiencing some difficulties with the old site. We established our own domain name and our Treasurer Damien VK3HGY (now VK3BUG) undertook most of the work in creating the new site – thanks Damien. The new club website can be found at http://www.vk3bez.org/

We also learnt that the new owners of the buildings in which our club rooms were located wished to charge us significant rent – we had previously enjoyed the sole use of the space at no charge, thanks to the generosity of the previous owners. A search of possible new venues resulted in us moving much of the club equipment and library into storage. Some equipment, such as the club WICEN portable repeater, went to the home of the appropriate committee member. Many members assisted with the move, which was completed in less than four hours. We began a relationship with the Churchill/Hazelwood Guide Group, which sees us using the hall once a month and for other events, such as Assessment events, for a small fee. It is hoped that we can make arrangements in the coming months to assist the Guides where we can provide the expertise and/or man-power.

The change of venue also required a change of meeting day, as the Guides were using the hall on our previous day of the week. We now meet on the first

Thursday of the month (except January) at 1930 hours. A map showing the hall location can be found on the Club website – look under "About VK3BEZ".

The year ended with informal discussions amongst members over a pizza supper. Many new members were very happy: on the weekend prior to the final meeting, we held a Foundation training and assessment event. The event attracted eight candidates from around the Latrobe Valley and South Gippsland. With a team of helpers and Assessors, the weekend went off very well. On the Sunday, we had three complete assessment teams, with an extra Assessor also on hand. On the Sunday morning, all but two candidates successfully completed the assessment tasks. We also had one candidate completing the Standard Theory component, having previously completed the Regulations assessment. One of the unsuccessful candidates arranged to attempt the assessment again on the Thursday evening, prior to the commencement of the monthly meeting. On this occasion, he was successful. As you can imagine, everyone at the meeting congratulated the new amateurs, who by now are all on-air and learning more about our diverse hobby.

GippsTech2008 announcement

The Eastern Zone Amateur Radio Club (Inc) is pleased to announce GippsTech2008. This year the event will be held on Saturday July 5 and Sunday July 6. This event has a well-recognised reputation as the premier technical conference in VK, focussing on techniques applicable to the VHF, UHF and microwave bands, especially for weak-signal contacts. In addition to the Conference, a Partners' Tour will be conducted, together with an informal social gathering for dinner on Friday and a Conference Dinner on Saturday.

Copies of the Conference Proceedings document from 2007 will be prepared so that they are available for sale during this year's event. Previous years' Proceedings are available – see the web site for details.

Geelong Radio and Electronics Society (GRES)

Rod Green VK3AYQ

One of the problems faced by the committee of any club is that of providing a program that is both educational and entertaining for the members. This is a daunting task for a club that meets monthly, but a monumental task for a club like ours that meets weekly. It is to the credit of our committee that they have satisfied both of those requirements. A review of the year just passed has revealed just how diversified the syllabus items and club activities have been. From within our ranks talks and demonstrations have been given on a range of topics. These included printed circuit board manufacture, soldering and safety when servicing valve radios.

On the practical side, members constructed antennas for the two metre band. Two different antennas were made, the first an omni directional vertical, and the second a four element Yagi. We held for the first time a competition to see who could build the best crystal set. This was very popular and members are looking forward to a similar competition in the future. Another evening that proved home brew is still alive was a show and tell. Members brought along their latest project and gave a brief description of it. Projects ranged from test equipment, to microcontroller projects and we even had an in-car (mobile) computer system. We had four guest speakers for the year. Their topics were: HF communication, digital and analogue SSTV, portable HF antennas, and renewable energy. As well as activities held in the club rooms, we also had two excursions for the year. The first was to the army military radio museum. The second was to a factory where sheet metal was cut using computer controlled carbon dioxide lasers. Members also participated in the John Moyle Field Day, and the International Lighthouse Lightship weekend.

Education and training was another very busy area. We had groups of Scouts and Guides along with pupils from a nearby primary school. These different groups were guided through the construction of a number of electronic projects. In addition to these classes, there were classes held for those who wanted to gain formal qualifications in amateur radio. As a result, there were another 35 Foundation and Standard licences issued for the year.

As we are the sole occupiers of our club rooms, we are in the fortunate position to be able to open the rooms more than once a week. Apart from the normal Thursday evening meetings, the rooms may be open up to four times per week. Our group of retired gentlemen has continued to meet every Wednesday morning. This group works on building maintenance and also restoration of vintage radios. News of this has spread by word of mouth and it is not unusual for a member of the public to call in for assistance with old radios or appliances that they are trying to repair. The computer group continue to meet on the 1st and 3rd Friday of the month. These meetings have a loose structure being informal, but are of benefit to anyone who has a computer problem. This group have been responsible for finding solutions to many computer related problems.

So, looking back over the year it can be concluded that we had a most successful year. The program for the next half year will be just as interesting and diversified. Visitors to Geelong will be welcome at our meetings which are held at 237A High St. Belmont Geelong at 8 pm local time every Thursday evening. Or perhaps you may like to visit on Wednesday mornings from 9:30 am until lunch time at the same address.

Centre Victoria RadioFest

Amateur Radio Victoria / Central Goldfields ARC / Midland ARC

Sunday 10 February Kyneton

If you only attend one radio event this year it should be the Centre Victoria RadioFest. The biggest of its type in Victoria and the only one supported by all the major commercial traders.

Plenty of bargains too in the huge second hand market area. Three vintage broadcast receivers will also be available for tender, their photographs appear on the website.

Learn about the D-STAR digital voice and data mode with two expert presentations using Icom equipment plus information hand-outs.

RadioFest is a family friendly event with an interesting program:

- VHF/UHF antenna gain measurement range – BYO antenna
- Mini-lectures - PicAStar and Small Space QTH Antennas
- Terry Murphy's Dipole Factory
- Wireless Institute of Australia
- WICEN (Vic) portable emergency comms
- Annual F-Troop photo call
- Home-brew equipment show n' tell
- Scout Radio display
- Australian Ladies Radio Amateur Association
- Club and group displays
- Information about how to become a radio amateur

D-STAR DIGITAL

Second-hand market place and car-boot sales alley. Contact Nick Angelo VK3UCK Email: vk3uck@hotmail.com phone 0448 653 201. Also see the website radiofest.amateurradio.com.au for an application form and conditions.

Catering: Hot and cold food and drinks catered by the Kyneton CFA Auxiliary. Hot breakfast available before the gates open. Free tea and coffee available all day. Or bring your own lunch to enjoy in picnic style. Free children's face painting and playground.

Entry tickets $10: Go on sale at 9am with gates opening at 10am. Free entry to children aged 12 and under. No pets or alcohol.

Door prizes: Entry tickets drawn for a Yaesu/Vertex FT7800, Icom IC-91AD D-STAR transceiver and other prizes.

Venue: Kyneton Racecourse, Campaspe Place (off Beauchamp St), Kyneton. Only 50 minutes from Melbourne and an hour from Ballarat and Bendigo. Plenty of free parking.

Info and talk-in: Mt Macedon 2m repeater VK3RMM 147.250MHz from 7.30am to 10.30am on the day.

Email: radiofest@amateurradio.com.au

Info: www.radiofest.amateurradio.com.au

Don't miss this major event and great social occasion for everyone with an interest in radio communications.

SmartAds 9802 5926

Geelong Amateur Radio Club – The GARC

Tony Collis VK3JGC

2007 VHF – UHF Spring Field Day

It is a notable achievement that the Geelong Amateur Radio Club has won the VHF – UHF Field Day, in the multi operator class, from 1991 to 2006, with the exception of 1992 where they were credited with 2nd place.

The 2007 Field Day event in this class is significant for two reasons, the first being that the factored score submitted this year of 4,878 is twice that of the 2006 total. The second is that this was achieved by working every nominated band from 6 m to 3 cm, even though the 6 m operation only contributed circa 2% to the overall score. Cherry picking on the high multiplier bands, with the limited time frame allowed, was not and never has been for the GARC a strategy in this highly competitive Field Day.

The station operators were David VK3QM, Chas VK3PY and Charles VK3NX.

The submitted log book (Table 1) shows that from midday on the 17th of November to midday on the 18th of November operating from the Barabool Hills, the following results were achieved in the multi-operator section:

Amongst the notable contacts were:

- VK3BJM/P2 in QF25 on 2 m, 70cm and 23 cm and both heard each other on 13 cm although an actual QSO did not take place.
- VK1CEA, a club station, in QF45 on 2m and 70 cm.
- VK5AKK and VK5NY in PF94 on 2 m.
- VK7CEJ in QE38 on 2 m.

Repeaters

VK3RGL on VHF, 147.000 MHz with a – 600 kHz shift, is operational but in the process of being upgraded by Ken VK3NW.

VK3RGL on UHF, 439.575 MHz with a - 5.000 MHz shift, is operational; both RGL repeaters are located on Mt. Anakie.

VK3RGC on VHF, 147.125 MHz with a + 600 kHz shift is currently not operational, from Montpelier. When Lee VK3PK is working on the controller, it will be possible to have IRLP working for brief periods.

Photo 1: Chas VK3PY at the operating position

Workshops

Three well attended construction evenings have taken place recently covering:

- Building of the Squid Pole antennas for the HF bands, on 80 and 40, designed by Dallas - VK3DJ.
- The building of VK3PK's RIG MASTA units for sale at the Ballarat Hamfest; these units plug into the CAT sockets on the popular ICOM, Kenwood and Yaesu transceivers and provide direct frequency input with automatic ARS shifts and the appropriate modes in line with the Australian Band Plan.
- A number of Doppler DF modules were assembled under the watchful eye of Peter VK3ZAV for "Fox Hunting", using AX25 to enable real time location of targets using triangulation. During this first session, the antenna switching units were built, requiring the main boards and antennas to be completed at home.

Presentations during November:

Short vertical antennas

Chas VK3PY and Dallas VK3DJ gave a presentation on the design of short, related to actual wavelength, vertical antennas and the effects of the positioning of the loading coils and capacity hats on radiation efficiency, using computer modelling tools to visualise the end designs.

Computer modelling of antennas

Gerhardt VK3HQ gave a presentation on the use of MMANA – GAL in the design of antennas. This computer program provides two and three dimensional plots of the antenna performance including its gain, F/B ratio and SWR over a bandwidth of your choosing. This program is available for downloading from the GARC website http://www.vk3atl.org/

Using multimeters

Chas VK3PY gave a presentation on the use and interpretation of electrical measurements taken with analogue and digital multimeters, and David VK3QM demonstrated an old style bridge ohm meter with a 'magic eye' tube tuning mechanism.

Back to basics

A three day bush session starting on the 30th of November, at the Dereel shack owned by VK3DJ. Those in attendance were VK3DJ, VK3VLH, VK3JGC, VK3FWGR, and VK3HQ. There are

Frequency	6 m	2 m	70 cm	23 cm	13 cm	9 cm	6 cm	3 cm
Contacts	21	69	54	33	14	1	1	1

Table 1

no mains gas, water or mains electrical facilities available; you use what you bring.

This time we had to share the accommodation with a number of unwanted guests: Huntsman spiders, bush flies and mosquitoes. Having applied all the advertised repellent guards, it was evident to us that the insects do not watch TV, as they continued to plague us!!

One of the main attractions of Dereel is working in an 'electrical interference free' environment, this however can lead to some frustration for whilst it is possible to copy a readability 5 signal at signal strength 0, regrettably the same cannot be said of the received contact's environment.

Working on 2 m with a mobile whip it was possible to copy VK7s and the occasional VK5 via their repeaters as there was a considerable lift occurring. HF Band conditions however were disappointing, limiting 10 m contacts to VK2 and VK4 on FM via the 10 m repeater and VK9 on SSB. Operations on 20 m were little better with the best contacts with A7IRM and VR2AJ on SSB. This however allowed considerable time for anecdotal yarns, 'bloke talk' and the consumption of red wine and cheese!

The GARC Net

The GARC net is held on Wednesday nights at 8:00 p.m. using the VK3RGL repeater on 147.000 MHz, hosted by the club president Ian VK3VIN using the club call sign VK3ATL. Non club members are welcome to join in.

Photo 2: Outside the Dereel shack: From left to right VK3DJ, VK3HQ, VK3QM, VK3VLH, VK3FWGR

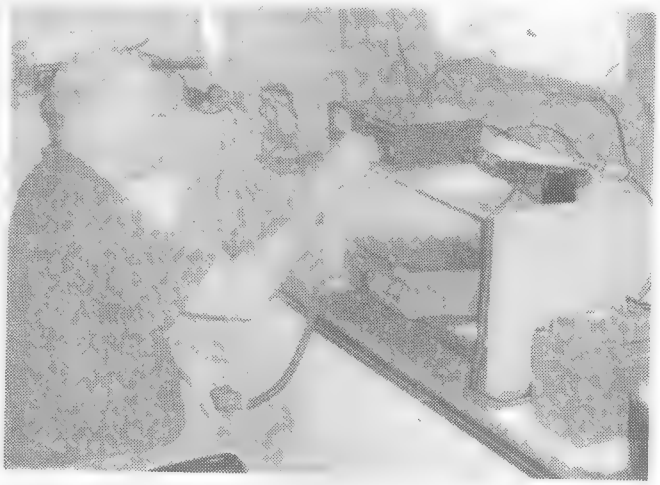


Photo 3: Dallas VK3DJ/p operating on the HF bands with the FT9800 providing 2 m coverage

Silent key

Alan Percival West VK4DWK

Alan West passed away quietly at the Royal Brisbane & Women's Hospital, Brisbane, Queensland, on Tuesday 20th November 2007 at 9.15 pm with loved ones present, he was 94 years old.

He was born on the 31/07/1913 in Perth WA. At the age of 20 years in 1933, he met his future wife Irene, aged 16 years. They married 3 years later and went on to have 6 children plus one adopted daughter, 18 grandchildren, 22 great grandchildren and 8 great great-grandchildren.

Even though they had 4 children by 1942, dad joined the RAAF and was a sergeant in the 31st Beaufighter Squadron in the ground crew and was posted first to Darwin during the attack and then to Moretai. After the war he settled in to family life again and to learning more. During this time he developed a desire to get into amateur radio which over the years became a passion. But due to family needs he was not able to really acquire decent equipment until 20 years ago. By that time he had hearing difficulties, so it was hard for him to enjoy his achievement to the maximum, but looking at his list of contacts, I am very pleased and proud of what Dad did achieve.

It was very frustrating for Dad for the last 2 years: he was finally able to have the ultimate of equipment, but not to able to enjoy it, but he was always trying up to the last and will keep trying in his radio shack in Heaven.

Robert M. West (son)

DX – News & Views

continued from page 30

PE7T. So QSL cards for ZL9BSJ/p and ZL2BSJ should be sent to PE7T.

W5UE is no longer the QSL manager for 9V1YC. The correct QSL manager is N5ID.

QSL 5L2MS - The first direct cards for 5L2MS (October 2007) are arriving. Henk, PA3AWW would like to remind that one USD does not cover return postage expenses and those direct requests will be processed via the bureau.

Special thanks to the authors of The Daily DX (W3UR), 425 DX News (I1JQJ) for information appearing in this months DX News & Views.

Interested readers can obtain from W3UR a free two week trial of The Daily DX from www.dailydx.com/order.htm

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VK5

Adelaide Hills Amateur Radio Society

Christine Taylor VK5CTY

AHARS had a busy end-of-year, as always. We had our Construction night in November, followed closely by the Buy and Sell. Both of which were great successes.

Graham VK5ZFZ brought along all the components and a very comprehensive set of instructions for members to make Gizmo 1. Gizmo 1 could be tuned, so when you had finished construction you could take it to Graham for testing.

From then on it was 'heads down, tails up' as everyone "had a go". Most members did complete the device and most of them tested successfully, but a few were going to be completed in a little more privacy, at home.

Photo 1: Jeanne VK5JQ proudly showing off her finished Gizmo 1.

Photo 2: The three prize winners for the Buy and Sell. L to R: Ron VK5RA, the Bushcom representative and Keith VK5OQ.

A few days later the "BUY AND SELL" was held on a brilliantly sunny day. This was the day friends met again after a year's break. The "wall-to-wall" crush and the noise level indicated, as usual, that everyone was having fun.

Three door prizes were allotted. Everyone was pleased when one of the hardest workers before and after the Buy and Sells, won the first one, (photo attached).

PLEASE NOTE – The VENUE and the FORMAT of the 2008 BUY AND SELL will be bigger and better in every way. The committee has been busy finding a larger venue with more parking and more room inside as well. We plan to have an area for "chitchat" and an area where we can have a couple of mini lectures, as well.

We may have a barbecue lunch as well as the usual pies and pasties provided by ALARA so we hope the whole event will be more enjoyable in every way.

WATCH THIS SPACE FOR FURTHER INFORMATION

To complete the year we had our End of Year Luncheon in mid December. Apart from the weather which complicated the seating arrangements the luncheon was pronounced a success by all who were there. The food was very good and the company was incomparable. The Christmas season was ushered in successfully.

AHARS wishes everyone a good 2008 and hopes to see you at our meetings. If you are visiting please contact John VK5EMI or David VK5AKM for more information about the regular meetings on the third Thursday of each month

Neville Campbell VK7NC

Neville Campbell VK7NC died mid December 2007. He was 95.

Neville became interested in radio as a schoolboy in Scottsdale in the 1920s, building a crystal set. After moving to Hobart, he was apprenticed as a jeweller and continued his interest in radio, building valve receivers.

Neville discovered amateur radio in 1931 and became thoroughly addicted.

In 1934 he started using the five metre band and later, on 20 metres, had the first beam antenna in Tasmania - a W8JK. The mast of the antenna came down the chimney of his room and he rotated it manually.

Following service in the RAAF during the war, Neville continued building transmitters, receivers and beam antennas until the advent of SSB and commercial transceivers.

Neville's jewellery background made him an excellent workman and his homebuilt equipment was a delight to see. There is a beautiful automatic Morse key made by Neville in the Max Loveless Collection.

Ric VK7RO

"Woody" John SBY Woodburn VK3AGD

1921 – 2007

Woody obtained his Amateur Licence soon after WWII. At his farm near Dunkeld in Western Victoria, he was a very active DXer on his home built transmitter and multiple long wires, as well as locally on 80 and 40, and later on two metres AM. He helped establish VK3RWZ on Mount William. He was a keen WIA supporter in the VK3 Western Zone, coaching many new "hams" before the new system was established. He was also a dedicated fire brigade operator and member of the pioneering Westmere Group net.

Woody was an outstanding Boy Scout leader and top class yachtsman, winning many races on the Western District lakes and on the sea off Warrnambool and Portland.

He is survived by his brother Bill and children Tom, Wendy and Jane.

Submitted by life-long friend Tony Wilson VK5AWD (ex VK3WB).

News from...

VK7

Justin Giles-Clark VK7TW
Email: vk7tw@wia.org.au Regional Web Site: reast.asn.au

February is Annual General Meeting month with NWTARIG's AGM on Saturday February 2, REAST's on Sunday February 10 at 11 am at the Domain Clubrooms and NTARC's on Wednesday February 13 at 7:30 pm at Allenvale TAFE College, Block B. It was great to see our weekly broadcast callback number increasing in 2007 by a further 12.7% over 2006. Congratulations to VK7 for coming second in the Remembrance Day contest 2007.

VK7 Sewing Circle Aids Solomon Islands

Back in June 2007 AR, we reported the great work that the VK7 Sewing Circle Net did in raising funds to help the islanders on the tiny Island of Simbo, in the Western Province of the Solomon Islands following the tsunami. The Sewing Circle has learnt that houses have been rebuilt, cooking utensils replaced, gardens to grow crops re-established and life is getting back to normal. With even better news that not all the funds were needed to re-establish housing and the unused balance has been used to start a small store on the island to supply Islanders from Simbo and surrounding islands with essentials they cannot grow or obtain on the Island. Makes you really appreciate what we take for granted. Great work to the Sewing Circle Net participants.

Meet the Voice BBQ 2008

The Sewing Circle Net will again be sponsoring the "Meet the Voice" event in the Ross Caravan Park on Sunday April 6, 2008. Last year was such a success that the same format of a guest speaker and then BBQ will again be run this year. Mark your diaries and we look forward to seeing you.

RIP BPL

On 27th November 2007, Aurora Energy announced it was abandoning its Broadband over Powerlines trial in VK7.

The press release stated that Aurora spent $2M of tax payers money on the trial and commented they would be re-focusing on the provision of fibre optic services and that the BPL trial would be stopped in the next six months. This is great news for VK7 amateurs.

Athol Johnson Contest

After an absence of some 25 years, the Athol Johnson Contest makes a comeback on Saturday February 16, 2008 from 10 am to 6 pm EDST. This is a VHF/UHF contest with extra points for mobile operation and contacts with F-calls. There is also the inaugural John Grace Perpetual Trophy for the foundation licensee with the highest accumulated score. Take a look at: http://reast.asn.au/events.php#AJContest for more details.

North West Tasmanian Amateur Radio Interest Group

The December 1st NWTARIG meeting was very well attended and following the short business meeting, there was a demo from Jim VK7JH on the subject of Packet Radio including all aspects of AX25 Packet Radio and the VK7NW BBS and VK7AX gateway. We welcome Mark Rapley VK7FMPR who recently passed his Foundation Licence assessment.

Northern Tasmania Amateur Radio Club

November 14 saw Mark Nightingale give a talk on radio station 7LA and the move to FM operation. A great show thanks Mark. December 12 was the annual pilgrimage to Myrtle Park with many braving the elements. A good show by all accounts. We welcome new Foundation licensees: Rebecca VK7FBEC, Malcolm (Rebecca's father), Anthony VK7FAMH, Yvonne VK7FYMX and Luke.

Neil VK7TTT could be labeled a superman given his Christmas time tumble from his quad bike breaking his arm in three places and gashing his leg requiring 12 stitches. Neil managed to right his quad bike and ride 15 kilometres to get help. A number of amateurs came to his rescue, thank goodness! Take it easy Neil.

Radio and Electronics Association of Southern Tasmania

We welcome the following Foundation licensees: John VK7FJGM, Scott VK7FSCO and Ben Smith VK7FBGS (Ben is only 10 years old). We also welcome the following new Standard licensees: Tom VK7NML, Derek VK7MAX, Robert VK7MAG, Roger VK7HMH, Chris VK7HCH and Len VK7HAJ. We also welcome the following Advanced licensees who have upgraded: Graeme VK7GAJ and Brian VK7BDW.

December 9, 2007 was our End of Year BBQ and we had a great attendance. The big event at the BBQ was the antenna draw. Many attendees put their name in a hat for one of nine Moonraker AT318 Autotune Mobile Verticals and the control boxes. A great social day and the weather was perfect. See you at the AGM and we will have more of those Moonraker antennas on offer!

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Contests

Phil Smeaton VK4BAA

Contest Calendar for February 2008 – April 2008

Feb	2/3	Mexico International RTTY Contest	RTTY
	9/10	CQWW RTTY WPX Contest	RTTY
	9	Asia-Pacific Sprint	CW
	9/10	RSGB 160 Metres Contest	CW
	16/17	ARRL International DX Contest	CW
	22/23	Russian PSK WW Contest	PSK31
	23/24	CQWW 160 Metres Contest	SSB
Mar	1/2	ARRL International DX Contest	SSB
	8/9	RSGB Commonwealth Contest	CW
	15/16	**John Moyle Field Day**	CW/SSB/FM
	22/24	BARTG RTTY Contest	RTTY
	29/30	CQWW WPX Contest	SSB
April	5/6	SP DX Contest	CW/SSB
	5/6	EA WW RTTY Contest	RTTY
	12/13	Japan International DX Contest	CW
	12/13	Yuri Gagarin International Contest	CW
	19	Holy land DX Contest	CW/SSB
	19	TARA Skirmish Digital Prefix Contest	PSK
	19/20	YU DX Contest	CW/SSB
	26	**Harry Angel Sprint**	CW/SSB
	28/29	Helvetia Contest	CW/SSB
	28/29	SP DX RTTY Contest	RTTY

A belated Happy New Year to all for 2008

It is the time of year that one is stuffed full of turkey sandwiches, turkey salad, turkey curry, the turkey list seems endless – surely the remains of such fowl is now a distant memory (unless you have stuffed the freezer full of it!) and contemplations now focus upon the contesting season. There are whispers of Cycle 24 now kicking-off a few spots on the sun so hopefully Santa has brought you that radio gear that you wanted – have you been a good boy or girl??

ANARTS 2007 Contest Results

The Australian National Amateur Radio Teleprinter Society (ANARTS) Contest took place some time ago now and the results of the contest are eagerly awaited by devotees. The ANARTS contest has something of a chequered history and the 'original' contest manager, Colin Davies, relinquished the role to ANARTS Secretary/Broadcast Officer Pat Leeper VK2JPA.

Pat has not forgotten the contest and has been busying herself with producing the results. Pat does not have any contest history to hand as this is her first tentative step into the world of contest management, but Pat has also hit upon a myriad of problems which have had a consequential knock-on effect on the contest results. Pat advises that she is working hard to complete the mammoth task and will issue the data very soon. The workload has been increased somewhat however, by entrants not submitting the correct data for adjudication. Using the latest version of software often helps greatly in this respect, but Pat also comments that the CQ zone of the station contacted is not always being recorded.

ANARTS is the only Australian RTTY contest, so why not give it some support in June and see how you go....? I am planning to enter this year as my RTTY gear should arrive (hopefully!) at the 'BAA QTH in time for some fun.

Spring VHF-UHF Field Day 2007 Results

The results and write-up for the Spring Field Day are published in this month's AR. It is great to see another good turn-out for the contest, with stations competing in multi and single operator categories and as well as categories for field day style and home operation. VK2FRBS and VK4FJON appear as the only 'F' calls to submit an entry – nice going Gents! Why not have a go next year, as either single or multiple

operator? See if a few others at the local club fancy submitting an entry – the contest manager John VK3KWA would be delighted to hear from you.

Commonwealth Contest

Beru, otherwise known as the Commonwealth Contest, will be taking place on 9th and 10th March 2008. In keeping with the cricketing traditions presented for the first time in 2007, it is proposed to organise a Commonwealth Team Contest along cricket team lines, to run in parallel with the normal Commonwealth Contest. This is again intended as a 'fun' event, although it (somewhat naturally!) also attracts some fierce competition.

The format for the Commonwealth Contest 2008 team competition is virtually identical to last year's competition, although the Oceania multiplier that we and the Kiwis benefited from has been reduced slightly, to give the rest of the Commonwealth a better chance. Seeing as us antipodeans (VK and ZL that is) beat the rest of the Commonwealth in 2007, I would say that they need as much help as they can get!

Steve VK6VZ is the Australian team organiser once again. Steve has the dubious task of Team selection for VK, and advises: *A good way to go this year is to look at the top 14 Australian scores in the Commonwealth Contest 2007 and first offer these operators the chance to be in the team for this year. These would make up the team of 11, plus three reserves. If any of these 14 cannot take part this year (or do not wish to), then their place will be offered to the competitor with the next highest score.*

This seems the fairest way of choosing a team - and encourages those who would like to be part of the team for 2009 to put in the best possible score for 2008.

On the basis of the above, the initial proposed 2008 team would consist of:

1. Kevin VK6LW (5335 pts)
2. Barry VK2BJ (5045 pts)
3. John VK4EMM (4860 pts)
4. David VK2AYD (3835 pts)
5. Steve VK6VZ (3495 pts)
6. Mike VK6HD (3055 pts)
7. Vlad VK2AEA (3050 pts)
8. Alan VK6BN (2920 pts)
9. George VK4XY (2845 pts)
10. Les VK4BUI (2805 pts)
11. Keith VK4TT (2770 pts)

Reserves

1. Karl VK2KM (2690 pts)
2. David VK2NU (2605 pts)
3. Russ VK4XA (2585 pts)

Teams will again be drawn from Australia, Canada, New Zealand, United Kingdom and the Rest of the Commonwealth. See www.beru.org.uk for further details. I am sure that VK can put in a good appearance in the contest and give 'em a good run for their money!

Photo 1: Raj VK4FRAJ in the shack of Dad (Eddie VK4AN). Photo by VK4AN.

Heard VK4AN lately?

If not, it would be best to have a QSO sooner rather than later. Why? Is Eddie ill? Not to my knowledge and hopefully not, but Eddie's son VK4FRAJ Raj has plans which involve Eddie's shack so Eddie might find himself on the sidelines for a contest or two! It has got to the stage where Eddie and Raj now have a roster drawn-up to see who gets 'air time'! Raj has been licensed since June 2007 and has a passion for CW, contesting, chasing DX and JOTA. I worked Raj in CQWW CW in November last year and had a splendid QSO on the key on 15 m. Raj called me at the tail-end of a bit of a pile-up and, as contest stations should do, I slowed my sending speed to match the station calling. Thing is, maybe I did not need to bother, as although I slowed from more than 30 WPM Raj had got my call correct at contest speed – not bad going at all. Raj is the ripe old age of 12 and has plans to get more air time as homework and chores allow. So, if Eddie wants to use his shack, Raj is highly likely to get a few more chores allocated in 2008…..

The photo shows Raj on 40 m, firmly ensconced in Eddie's chair with Eddie relegated to camera duties. Best get used to it Eddie! How long will it be before Raj catches-up with his Dad with DXCC entities I wonder?

CQ WW 160 metre CW Contest 2007 Results

VKs only (Call\Score)

VK6VZ/6 26,978

Thanks for flying the flag Steve and well done on a good score. This contest, and indeed its SSB counterpart, generally takes a little bit of real estate to put a competitive station together as the antenna/s need to be large and as high as you can muster. For working DX (multipliers in this contest requires DX to be worked) a low angle of take-off is required but the height for a dipole at a halfwave on 160 m is a daunting task. In order to get a low angle take-off from the antenna, hardware such as a four-square antenna system plus radials would be good, along with a selection of beverage antennae for receiving through either man-made noise or tropical storms. These antennae are not small items and are not a simple matter to make effective either! Steve has spent a great deal of time and effort on his 160 m station and

Photo 2: Oceania Contest Plaques await shipping to their recipients. Photo by ZL1AZE.

has had a keen interest in the band for quite a while now.

Frequency wise, the band is not the widest on LF making receiving an even more skilful task with being full of contesting stations from around the globe if conditions allow. The contest requires multipliers from the sum of countries worked and W/VE multipliers worked, but the band plans around the world for Top Band do not tend to align greatly with DL not being permitted above 1850 kHz for example, so unless you choose a good spot on the band you could run the risk of missing certain country multipliers. The BY radar also took its toll during the contest with reports from Japan of trouble whilst trying to work EU and NA. Top Band is not the only amateur radio allocation to suffer from this aspect, with 40 m and 80 m also experiencing periodic problems in VK.

CQ WW 160 metre SSB Contest 2007 Results

VKs only (Call\Score)

VK9DNX 680

An interesting result this one. The callsign appears to have an incorrect prefix for Norfolk Island. I always thought that it was VK9N and not VK9D, possibly as a result of a typing error on the licence document. I have no idea as to the actual reason or even if it was an error as such. If I recall correctly, the team consisted of Germans on a short visit to the island for some contest fun and relaxation. They won this Oceania country section with 11 QSOs!

Oceania contest - A Plethora of Plaques

The plaques for winners of the Oceania Contest should be safely in the hands of their recipients by now. Photo 2 shows the plaques being assembled ready for shipping to those fortunate enough to be awarded the honour. It is no mean feat to collate the results and dispatch these awards, so it is of great credit to the Contest Committee which consists of Tony VK3TZ, Phillip VK2FHN, Mirek VK6DXI, Martin VK7GN, Brian ZL1AZE, Wilbert ZL2BSJ and Geoff ZL3GA.

HST 2008

"HST" stands for High Speed Telegraphy. The ARI (Italian radio amateur association) recently announced that from April 23rd to April 26th 2008, the 6th International High Speed Telegraphy Championship HST2008 (High Speed Telegraphy) in Pordenone (Italy) will take place during the 43rd edition of Radioamateur Fair. More details at http://www.hst2008.org

The tests involve callsign recognition utilising RUFZ XP and pile-up simulation using Morse Runner and feature entry categories for all ages. Not everyone's cup of tea particularly, but it is interesting to see the proposed software for the championship. This software is freely available on the internet and can be used to sharpen-up pile-up skills and general reception under less than perfect conditions.

If you have any contest related material for inclusion within the column, topics that you would like covered or even some experiences and pictures you would like to share, then please feel free to get in touch via vk2baa@wia.org.au. See you on the bands.

73 de VK4BAA Phil Smeaton

Over to you

Exchange difficulties

My name is Lars Ippich DL8TUX/VK3LAR. I am a German exchange student living in Shepparton, Victoria since the middle of July until the end of April 2008.

Unfortunately, living with my first host family did not work out and my exchange organisation and I had trouble to find a new family without having me to move over 80 kilometres.

But then Jacek VK3TJS offered me a stay in his house until November. He cannot host me any longer, because his oldest daughter comes back from university then and needs her room back. But hosting a nearly complete stranger for more than three months without getting paid anything is a great example of ham spirit I think. And he is even supporting me in every possible way by trying to show me as much of this part of Australia as possible and encouraging me to do different activities.

I would like to thank Jacek and his family for this when I leave them in November and thought it might be a good idea to do this in the *Amateur Radio* magazine. What do you think about it?

73 de Lars DL8TUX/VK3LAR

(Editor's note: By now, Lars will have moved on. My apologies for the delay in having this OTY item published.)

John Moyle Field Day Contest 2008

Presented by Denis Johnstone (VK4AIG/VK3ZUX)

15 - 16 March, 2008
0100 UTC Sat - 0059 Sun

I wish all entrants good luck, and look forward to hearing you on air during the contest!

N.B. new Email address: jmfd2008@wia.org.au and you can check out latest info at http://www.wia.org.au/contests/

Overview

1. The aim is to encourage and provide familiarisation with portable operation, and provide training for emergency situations. The rules are therefore designed to encourage field operation.
2. The contest takes place on the 3rd full weekend in March each year, and runs from 0100 UTC Saturday to 0059 UTC Sunday, 16-17 March 2008.
3. The contest is open to all VK, ZL and P2 stations. Other stations are welcome to participate, but can only claim points for contacts with VK, ZL and P2 stations.
4. Single operator portable entries shall consist of ONE choice from each of the following (e.g. 6 hour, portable, phone, VHF/UHF):
   a 24 or 6 hour;
   b Phone, CW, or All modes;
   c HF, VHF/UHF or All Bands.
5. Multi-operator portable entries shall consist of ONE choice from each of the following (e.g. 24 hour, portable, phone, VHF/UHF):
   a 24 or 6 hour;
   b Phone, CW, or All modes;
   c HF, VHF/UHF or All Bands.
   d. Digital modes – RTTY, Packet, PSK31, etc will be trialled this year. Scoring: 2 points per contact irrespective of band.
6. Home and SWL single operator entries may be either 24 hour or 6 hour, all modes, all bands.
   a Phone, CW, or All modes;
   b HF, VHF/UHF or All Bands.
   c. Digital modes – RTTY, Packet, PSK31, etc will be trialled this year. Scoring: 2 points per contact irrespective of band.

Scoring

7. Portable HF stations shall score 2 points per QSO.
8. Portable stations shall score the following on 6 m:
   a 0-49 km, 2 points per QSO;
   b 50-99 km, 10 points per QSO;
   c 100-149 km 20 points per QSO;
   d 150-299 km 30 points per QSO;
   e 300-499 km 50 points per QSO;
   f 500 km and greater, 2 points per QSO.
9. Portable stations shall score the following on 144 MHz and higher:
   a 0 to 49 km, 2 points per QSO;
   b 50 to 99 km, 10 points per QSO;
   c 100 to 149 km, 20 points per QSO;
   d 150 to 300 km, 30 points per QSO.
   e 300 km and greater, 50 points per QSO.
10. For each VHF/UHF QSO where more than 2 points is claimed, either the latitude and longitude of the station contacted or other satisfactory proof of distance such as the 6-figure Maidenhead Locator must be supplied.
11. Home stations shall score:
   a Two points per QSO with each portable station.
   b One point per QSO with other home stations.

Log Submission

12. For each contact: UTC time, frequency, station worked, RST/ serial numbers sent/received and claimed score. (VHF and above location of other station and distance showing the Lat/Long or Maidenhead Locator to 6 figures for the station worked.)
13. Logs must be accompanied by a summary sheet showing: call sign, name, mailing address, section entered, number of contacts, claimed score, location of the station during the contest, and equipment used, and a signed declaration stating "I hereby declare that this station was operated in accordance with the rules and spirit of the contest and that the contest manager's decision will be accepted as final". For multi-operator stations, the names and call signs (legible) of all operators must be listed.
14. Paper logs may be posted to "John Moyle Contest Manager, 27 Laguna Ave, Kirwan 4817 QLD". Alternatively, logs may be e-mailed jmfd2008@wia.org.au, vk3zux@wia.org.au or to vk3zux@hotmail.com or snail mailed via the WIA Contest Manager JMMFD, P.O. Box 2175 Caulfield Junction, VIC 3161. The following formats are acceptable: Microsoft Excel or Word, ASCII text or electronic log programs such as VK Contest Log (VKCL). Logs sent by disc or e-mail must include a summary sheet and declaration, but the operator's name (legible) is acceptable in lieu of a signature. Logs must be postmarked no later than 30 April 2007.

Certificates and Trophy

15. At the discretion of the Contest Manager, certificates will be awarded to the winners of each portable section. Additional certificates may be awarded where operation merits it. Note that entrants in a 24 hour section are ineligible for awards in a 6 hour section.
16. The Australian portable station, CW section, with the highest CW score will be awarded the President's Cup, a perpetual trophy held at the National Office, and will receive an individually inscribed wall plaque as permanent recognition.

Disqualification

17. General WIA contest disqualification criteria, as published in Amateur Radio from time to time, applies to entries in this contest. Logs which are illegible or excessively untidy are also liable to be disqualified.

Definitions

18. A portable station comprises field equipment operating from a power source, e.g. batteries, portable generator, solar power, wind power, independent of any permanent facilities, which is not the normal location of any amateur station.
19. All equipment comprising the portable station must be located within an 800 m diameter circle.
20. A single operator station is where one person performs all operating, logging, and spotting functions.
21. A single operator may only use a call-sign of which he/she is the official holder. A single operator may not use a call-sign belonging to any group, club or organisation for which he/she is a sponsor except as part of a multi-operator entry.
22. A multi-operator station is where more than one person operates, checks for duplicates, keeps the log, performs spotting, etc.
23. A multi-operator station may use only one call sign during the contest.
24. Multi-operator stations may only use one transmitter on each band at any one time, regardless of the mode in use.
25. Multi-operator stations must use a separate log for each band.
26. Logs submitted electronically can use a separate excel worksheet for each band linked to a summary sheet. A typical example is shown at http://www.wia.org.au/contests which can be copied and adapted for the individual use of either a single or multi operator station.
27. A station operated by a club, group, or organisation will be considered to be multi-operator by default.
28. None of the portable field equipment may be erected on the site earlier than 28 hours before the beginning of the contest.
29. Single operator stations may receive moderate assistance prior to and during the contest, except for operating, logging and spotting. The practice of clubs or groups providing massive logistic support to a single operator is, however, totally against the spirit of the contest. Offenders will be disqualified, and at the discretion of the manager, may be banned from further participation in the contest for a period of up to three years.
30. Phone includes SSB, AM and FM.
31. CW includes CW, RTTY, and packet.
32. It is not expected that any other modes will be used in the contest, but if they are, they shall be classed as CW.
33. All amateur bands may be used except 10, 18 and 24 MHz. VHF/UHF means all amateur bands above 30 MHz. Note: On 50 MHz, the region below 50.150 has been declared a contest free zone, and contest CQs and exchanges may only take place above this frequency. Stations violating this rule will be disqualified.
34. Cross-band, cross-mode and contacts made via repeaters or satellites are not permitted for contest credit. However, repeaters may be used to arrange a contact on another frequency where a repeater is not used for the contact.
35. Stations may make repeat contacts and claim full points for each one. For this purpose, the contest is divided into eight consecutive three-hour blocks: 0100-0359, 0400-0659, 0700-0959, 1000-1259, 1300-1559, 1600-1859, 1900-2159, 2200-0059 UTC. If you work a station at 0359 UTC a repeat contact may be made after the start of a new block providing they are not consecutive, or are separated by at least five minutes, since the previous valid contact with that station on the same band and mode.
36. Stations must exchange ciphers comprising RS(T) plus a 3 digit number commencing at 001 and incrementing by one for each contact.
37. Portable stations shall add the letter "P" to their own cipher, e.g. 59001P.
38. Multi-operator stations are to commence numbering on each band with 001.
39. Receiving stations must record the ciphers sent by both stations being logged. QSO points will be on the same basis as for Home Stations, unless the receiving station is portable.
40. The practice of commencing operation and later selecting the most profitable operational period within the allocated contest times is not in the spirit of the contest, and shall result in disqualification. The period of operation commences with the first contact on any band or mode, and finishes either 6 or 24 hours later.

If anyone wishes to contact me privately to discuss rules etc, my home phone number is (07) 4723 4229, and my snail mail and e-mail address is as shown in the Log Submission section above.

Denis Johnstone (VK4AIG/VK3ZUX)

Silent key

Ron Sieber ex VK4KN

I first met Ron about 40 years ago at Mitcham in South Australia, where he then lived and ran a small-goods factory for a local butcher chain. He had become interested in amateur radio and attended the VK5 Division of the WIA.

I may have been running the VK5 weekly broadcast at the time, as I cannot remember the actual dates, but I expect that may have been how we initially came into contact.

Ron was one of my first students around the kitchen table and he went on to pass the AOCP and operated enthusiastically on six metres for some time with the callsign of VK5ZCE.

Ron and wife June later decided to relocate to Alice Springs with their young children, where Ron continued with his trade, took up the call-sign of VK8ZQ and met John VK5YY, in Flight Service at the Alice Springs airport.

Following a period in the Territory, Ron and XYL moved back to Brisbane from where they had originally set out. The callsign then changed to VK4KN and we contacted as often as conditions would permit for some years.

Ron passed away while on a visit to friends south of Brisbane on 31 October 2007. A friend and another amateur thus joins the ranks of the Silent Keys.

I am indebted to Ron's son Ray for passing on the sad news.

Murray Burford VK5ZQ.

RD Contest 2007

Peter Harding VK4OD

Individual HF Results

HF Multi Op Open 2-2-3

Call Sign	Score
VK2ATZ	1660
VK1ACA	604
VK3SAT	555
VK2AMW	349
VK6SH	164

HF Multi Op CW 2-2-2

Call Sign	Score
VK2ATZ	206

HF Multi Op Phone 2-2-1

Call Sign	Score
VK2ATZ	1450
VK2WIA	807
VK7AC	541
VK7OTC	428
VK3BJA	274
VK2BV	185
VK3CNE	37

Receiver Only 2-1-4

Call Sign	Score
VK6ABM	74

HF Single Op Open 2-1-3

Call Sign	Score
VK7GN	920
VK3YXC	861
VK1DA	574
VK2AYD	476
VK7TW	269
VK4BUI	258
VK4FRAJ	254
VK5UV	253
VK2IO	187
VK4JRO	182
VK1WX	179
VK3JS	177
VK2BOR	174
VK4HTM	173
VK4TJ	155
VK7FWAY	140
VK5WO	128
VK5TFR	115
VK4FLR	109
VK7RR	109
VK1XYZ	104
VK6KPA	80
VK5XE	79
VK4ZA	78
VK6JB	72
VK6CB	71
VK2YW	70
VK3TWO/6	69
VK3ECH	61
VK3KYF	58
VK3FNBL	48
VK3MOU	46
VK2XF	44
VK1HMS	43
VK6XC/P	42
VK1KBN	34
VK1DSH	33
VK4FK	32
VK3FCLS	31
VK6RZ	24
VK3AKT/MM4	22
VK2XTC	21
VK4IW	20
VK4ZPP	15
VK7QP	14
VK6BDO	12
VK3ZGP	10
VK2JNA	6
VK6PMY	4
VK6MRS	2

HF Single Op CW 2-1-2

Call Sign	Score
VK2AWD	354
VK4LV	318
VK5ATU	292
VK2BHO	222
VK5UM	172
VK1WJ	122
VK2BCC/MM	102
VK6AJ	82
VK4XY	74
VK6AFW	72
VK7EE	56
VK2II	56
VK3TX	50
VK2RJ	42
VK7RO	40
VK3GDM	34
VK4RE	28
VK4CEU	15
VK2YA	12
VK2MGM	10

HF Single Op Phone 2-1-1

Call Sign	Score
VK4ZD	740
VK4VCH	547
VK3HGC	533
VK5KCX	527
VK4PTO	525
VK5SN	424
VK5BC	375
VK3DDU	347
VK3BKU	336
VK4CAG	328
VK1KLW	287
VK7YBY	266
VK3AV V	245
VK2BHG	227
VK5ZDW	222
VK2LCD	209
VK4KAD	208
VK4FTBA	201
VK2BAM	200
VK3AHY	191
VK5AR	191
VK2VKV	189
VK3KMB	182
VK7KC	180
VK2DM	180
VK3IO	179
VK7HIM	170
VK5DK	170
VK2ZCM	166
VK7CK	163
VK2FREK	160
VK3ADW	160
VK4WIG	154
VK2ENG/QRP	144
VK2ZPT	141
VK7HLE	138
VK6ARA	135
VK4TE	132
VK7HK	128
VK5YX	119
VK2ASU	112
VK5HBG	110
VK6CSW	109
VK5ZQV	109
VK5AJW	108
VK2JAM	108
VK5ZIG	108
VK3ALA	108
VK3AWN	105
VK3AMW	104
VK4AWL	96
VK3SAY	91
VK6ADI	90
VK7HDM	85
VK5FAAF	84
VK5RV	80
VK4DX	78
VK3ASU	77
VK7CEJ	75
VK5ZDB	73
VK6NWK	71
VK2ZZ	70
VK1EY	68
VK4BTW	68
VK4PJP	61
VK6CG	60
VK3JK	58
VK3KQB	58
VK2EI	54
VK5OV	54
VK2UVP	53
VK6JEE	49
VK5ALX	48
VK6LXU	48
VK6AB	48
VK3HBA	44
VK7ZGK	43
VK7NCW	42
VK6ZA	42
VK4ADW	37
VK3YAZ	36
VK2JH	36
VK4GLC	35
VK4DBJ	34
VK5LL	34
VK6AR	33
VK6KRC	33
VK6MJS	32
VK5HLS	32
VK6JP	30
VK5HO	30
VK7JGD	30
VK7RM	27
VK3FR	26
VK5AEY	26
VK7VH	25
VK4FGLS	25
VK3DS	23
VK2XT	23
VK1WJ	21
VK2FDAS	21
VK5TW	20
VK6DAT	20
VK3DY	20
VK4ZW	19
VK5RK	19
VK6MM	19
VK5OQ	18
VK4YNF	18
VK5BWA	17
VK4JM	15
VK6ARG	15
VK4JJ	15
VK1KEP	14
VK2ZQX	14
VK6COM	14
VK4ZBV	13
VK6YOY	13
VK5HAE	13
VK5OF	13
VK6SN	13
VK1ZCM	12
VK3NWJ	12
VK4ZJ	12
VK6FLUX	10
VK3KRB	10
VK6FZUK	9
VK6RRG	8
VK4OD	8
VK4AA	8
VK4VY	8
VK4VW	8
VK4SWE	6
VK6GL	5
VK4HOL	5
VK6JRC	3
VK6JO	2
VK6LOT	1
VK6HWF	1

Individual VHF Results

VHF Multi Op Open 1-2-3

Call Sign	Score
VK6ZLZ	248
VK1ACA	47

VHF Multi Op Phone 1-2-1

Call Sign	Score
VK6WIA/P	336
VK6WIE/P	336
VK6WH/P	336
VK6SCS/P	333
VK6FIVE/P	331
VK6LZ	302
VK3BJA	275
VK6OTN/P	249
VK3ER	89
VK3CNE	86

VHF Single Op Open 1-1-3

Call Sign	Score
VK6BDO	649
VK6RRG	644
VK3TWO/6	342
VK7TW	185
VK6HIM	170
VK8HIM	170
VK6RZ	145
VK4KY	138
VK3KE	125
VK1DA	92
VK7FDAE	78
VK6NX	66
VK1HS	54
VK7RG/1	54
VK6MRS	43
VK6FXYL	39
VK6PMY	37
VK6XC/P	14
VK6NX	2

VHF Single Op Phone 1-1-1

Call Sign	Score
VK6KAD	417
VK6KY	386
VK6LXU	385
VK6GO	384
VK6AHR/P	336
VK6CSW	311
VK6FREQ	300
VK6MHZ	300
VK5AKK	283
VK4AML	255
VK7HDM	230
VK6YOY	225
VK6HGR	214
VK6JP	214
VK6KHZ	212
VK4AR	203
VK6MM	198
VK4ZBV	170
VK7ZGK	162
VK6FLUX	152
VK7KEG	152
VK5BC	152
VK6CN	141
VK5AVQ	140
VK3WT	129
VK6DAT	129
VK6ARA	126
VK6COM	124
VK3AAK	120
VK6FZUK	115
VK7RR	114
VK7FMBX	103
VK6PT	100
VK4ZW	97
VK3BGS	96
VK6RO	89
VK3JK	85
VK5ZKK	82
VK6CRO	81
VK6ARO	81
VK6SIX	80
VK6MJS	76
VK3NWJ	76
VK6TS	75
VK6AB	64
VK7HLE	63
VK1DW	63
VK6AJL	62
VK6KFD	60
VK6HKW	57
VK7RM	57
VK1BP	53
VK6SH/P	51
VK6SAA/P	51
VK5RV	50
VK3FRST	48
VK5ZB	46
VK3KRB	46
VK4ZA	45
VK1EY	43
VK6AR	43
VK6FTIM	43
VK4GLC	40
VK1DSH	39
VK5BUI	34
VK6LOT	32
VK3AV V	31
VK3KK	31
VK6KG	31
VK6SN	30
VK1KLW	29
VK6HK	27
VK4JAZ	27
VK6ALU	27
VK7HK	25
VK6HWF	24
VK4OD	23
VK4AA	23
VK6FANT	23
VK6JEE	23
VK7JGD	23
VK6FPAT	20
VK3XH	20
VK4FNQA	18
VK5OF	16
VK3XJU	15
VK6ABM	14
VK5ATQ	13
VK1ZCM	12
VK1WJ	11
VK7VH	10
VK5HBG	8
VK4VY	8
VK6JO	7
VK6ARG	7
VK2EI	7
VK5AEY	6
VK3HBA	5
VK2ZCM	3
VK6MOD	2

Spring VHF-UHF Field Day 2007: Results

Contest manager: John Martin VK3KM

The Spring Field Day was well supported. Propagation was average and weather was quite variable, but there were plenty of contacts to be made. Logs were again very readable and well presented – thanks to all for making it an easy job to check through the logs.

Thanks to entrants for their careful observance of the rules. But I would repeat my usual request to all stations - please use those tuning knobs! All stations are asked to keep clear of designated DX calling frequencies. The recommended contest calling frequencies are 50.150, 144.150 etc, but it is logical to spread out and tune around rather than making a queue on the one frequency.

The winners of the five sections were: Gavin VK3HY, Michael VK3AAK, the Lara crew of VK3UHF, the SERG station VK5SR, and Matt VK2DAG. Congratulations to these winners, and to all who took part.

Call	Name	Location	50	144	432	1296	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	TOTAL
Section A: Single Operator, 24 Hours											
VK3HY	G. Brain	QF32	116	651	815	792	-	-	-	-	2374
VK4OE	D. Friend	QG62/63	48	306	455	648	480	-	-	430	2367
VK4JMC	J. McPherson	QG62	101	561	660	568	-	-	-	-	1890
VK5NY	R. Bowman	PF94	286	603	150	336	-	-	-	-	1375
VK2FRBS	R. Simon	QF57	-	489	430	-	-	-	-	-	919
VK2AMS	M. Swannack	QF68	60	240	295	168	-	-	-	-	763
VK2EAH	A. Hood	QF57	-	222	295	-	-	-	-	-	517
Section B: Single Operator, 8 Hours											
VK3AAK	M. Coleman	QF01,02,11,12	-	435	560	688	-	-	-	-	1683
VK3UBM	M. Borthwick	QF11,12,21,22	-	237	380	432	540	-	-	-	1589
VK3ECH	R. George	QF13	44	318	295	552	-	-	-	-	1209
VK3BG	E. Roache	QF13	44	291	295	552	-	-	-	-	1182
VK3BJM/2	B. Miller	QF25	-	276	225	264	-	-	-	-	765
VK2JDH	D. Hardy	QF57	105	255	365	-	-	-	-	-	725
VK5OQ	K. Gooley	PF95	149	132	210	176	-	-	-	-	667
VK3YFL	B. Dunkley-Smith	QF22	46	240	230	-	-	-	-	-	516
VK2EAH	A. Hood	QF57	-	183	240	-	-	-	-	-	423
Section C: Multi Operator, 24 Hours											
VK3UHF	LUMEG (1)	QF21	91	747	965	1240	740	210	210	670	4873
VK1DA	(2)	QF44	103	600	760	968	340	-	-	-	2771
VK1CEA	(3)	QF45	84	600	750	840	350	-	-	-	2624
VK1BL	(4)	QF44	71	582	645	616	480	-	-	-	2394
VK3ER	EMDRC (5)	QF22	186	759	700	744	-	-	-	-	2389
VK2MA	HADARC (6)	QF56	119	663	540	536	-	-	-	-	1858
VK4WAT	TREC (7)	QH22	83	318	310	376	-	-	-	260	1347
VK5AR	(8)	PF94	156	348	390	184	-	-	-	-	1078
Section D: Multi Operator, 8 Hours											
VK5SR	SERG (9)	QF02	147	360	505	544	440	210	210	330	2746
VK3AXH	(10)	QF12	71	363	455	640	320	-	-	-	1849
VK3FRC	FAMPARC (11)	QF21	111	654	485	376	-	-	-	-	1626
VK2MA	HADARC (6)	QF56	95	414	420	472	-	-	-	-	1401
VK3BJA	GGREC (12)	QF21	97	306	230	256	-	-	-	-	889
VK5AR	(8)	PF94	59	225	350	176	-	-	-	-	810
VK1YBQ	(13)	QF44	60	240	270	-	-	-	-	-	570
VK3HJV	(14)	QF01	-	255	285	-	-	-	-	-	540
Section E: Home Station, 24 Hours											
VK2DAG	M. Hetherington	QF56	114	714	695	896	-	-	-	-	2419
VK2DVZ	R. Barlin	QF68	-	531	450	560	-	-	-	-	1541
VK2EI	N. Sandford	QF68	36	483	455	-	-	-	-	-	974
VK2KOL	C. Hadland	QF56	-	396	565	-	-	-	-	-	961
VK4ZDP	D. Purkis	QH32	137	276	280	216	-	-	-	-	909
VK4AR	G. Ryan	QG62	103	177	290	-	-	-	-	210	780
VK2BHO	J. Hodkinson	QF55	86	300	390	-	-	-	-	-	776
VK3TPR	P. Roberts	QF22	-	279	305	-	-	-	-	-	584
VK3ECH	R. George	QF23	21	138	160	-	-	-	-	-	319
VK3CEM	F. McCowan	QF22	-	252	-	-	-	-	-	-	252
VK4FJON	J. Cockinos	QG62	-	126	120	-	-	-	-	-	246
VK2ZQX	J. Watson	QF59	-	99	-	-	-	-	-	-	99

Awards

Malcolm K. Johnson VK6LC
WIA Awards Manager.

WIA Multiband DXCC Program annual "DXer awards" 2007

This new annual award was introduced in June 2005 and has only been running three years and we have now 17 stations certified. We encourage all other members to have a go and join this program.

For this period we have four WIA DX members that have top tallies for 9BDXCC, 5BDXCC, and 3BDXCC.

They are:

9BDXCC – VK:

David McAulay VK3EW of Cranbourne, Victoria. Top tally of 2214 countries over 9 Bands.

5BDXCC – VK:

Allan Meredith VK2CA of Broken Hill, NSW Top tally of 848 countries over 5 Bands.

5BDXCC – DX:

David Rankin 9V1RH of Faber Hills, Singapore. Top tally of 752 countries over 5 Bands.

3BDXCC – VK:

Gwen Tilson VK3DYL of Mt. Waverley, Victoria. Top tally of 578 countries over 3 Bands.

WIA Awards Program 60th Anniversary 2007

MultiBand DXCC Program 1st September 2005

The "WIA DXer" awards are for 3-11 Band classes, awarded to Australian and overseas participants where applicable.

The close off date for these awards will be 31st December each year.

It can only be awarded to the same person once in every three years and all awards will be judged on performance, participation and spirit towards the Multiband DXCC Program.

Certificates:

These are truly outstanding, colourful and have a world class identity. All of these awards are graphically designed for A4 with a thickness 200gsm Colortech. They are produced and donated by the Awards Manager.

All awards will be approved by the National Board of Directors, signed by the W.I.A. President and the Awards Manager.

WIA MultiBand DXCC Program. January 2008

	Callsign	2 m	6 m	10 m	12 m	15 m	17 m	20 m	30 m	40 m	80 m	160 m	Bands	Total	Average
1	VK6HD			305	263	322	311	332	312	331	315	246	9	2737	304
2	VK3QI			293	283	309	297	336	314	302	247	117	9	2498	278
3	VK3EW			278	231	304	254	328	137	292	284	106	9	2214	246
4	CT1EEN		110	294	290	324	305	328	146	243	163		9	2203	245
5	VK4AN			238		257	127	304	104	230	107		7	1367	195
6	VK5WO			155		153	106	254	109	225	134		7	1136	162
7	VK3PA			135		145		269	109	178	230		6	1066	178
8	PY2DBU			199	125	187	104	276	102				6	993	166
9	VK6LC			121		154		307		196	145		5	923	185
10	UA6LDD			189		190		191		189	148		5	907	181
11	VK3TZ			184		197		263		139	115		5	898	180
12	VK2CA			166	103	208	116	217					5	810	162
13	9V1RH				149	173	139	154		137			5	752	150
14	VK3KE			115		183		292		118			4	708	177
15	VR2XMT		154			127	162	172					4	615	154
16	VK3DYL			114		168		296					3	578	193
17	VK4QO			136		158		244					3	538	179
18	WA5UA			102		106		128					3	336	112
	Averaged		**132**	**189**	**206**	**204**	**192**	**261**	**167**	**215**	**189**	**156**	**6**	**1182**	**191**

Spring VHF-UHF Field Day 2007: Results *(continued from previous page)*

(1) Lara UHF-Microwave Experimenters' Group: Chas Gnaccarini VK3PY, David Learmonth VK3QM, Charlie Kahwagi VK3NX

(2) A. Davis VK1DA, C. Davis VK2DO.

(3) Andy Sayers VK2AES, Russell Manning VK1JRM, Dale Hughes VK1DSH, Sean Barwick VK1SSB, Tom Green (SWL).

(4) Ted Garnett VK1BL, Greg Parkhurst VK1AI

(5) Eastern and Mountain District Radio Club: VK3QI Peter Forbes, VK3VF Jonas Sadauskas, VK3WT Max Chadwick, VK3WWW John Bramham

(6) Hornsby & District ARC: VK2TPK Peter, VK2DAY Rod, VK2STG Mal, VK2ANG Rose, VK2BCD Steve, VK2FMAM Paul, VK2HKJ Kirsty, VK2FEAH Emma, VK2TTP Peter, VK2FDIW Dave, VK2FJLW Jessica, VK2ZJG Josh, VK2FALM Alex, VK2FRDW Rod, VK2HMS Mick, VK2HRX Compton, VK2FTEC Taylor, VK2PIZ George

(7) Tableland Radio & Electronics Club. John Roberts VK4TL, Dave West VK4ADW, Trevor Gregory VK4ZFC, Dale McCarthy VK4DMC.

(8) Alan Raftery VK5AR, Andrew Russell VK5ZUC, David Clegg VK5AMK.

(9) South East Radio Group: Colin Hutchesson VK5DK, Tom Aubrey VK5EE, Andrew McKinnis VK5KET, Ian Bishop VK3FNBL, Mathew Williamson VK5HMW

(10) VK3AXH Ian McDonald, VK3IDL Ian Lloyd, VK3AIG John Kennedy

(11) Frankston & Mornington Peninsula ARC: Roy VK3GB, Gerard VK3GER, David VK3EW, Stjepan VK3TSN, Andrew VK3MUD

(12) Gippsland Gate REC: Albert VK3BQO, Helmut VK3DHI, Phil VK3YB, Kerri-May VK3FDSD, Ivan VK3ARV, Doug VK3KMN, Bruno VK3BFT, Pat VK3OZ.

(13) Hauke Wunderlich VK1YBQ, Al Long VK1PAR, Charles Muller VK1ZCM, Waldis Jirgens VK1WJ.

(14) Paul Brown VK3HJV, Gary Smith VK3LCD

ar

David Smith VK3HZ
vk3hz@wia.org.au

Weak Signal

David Smith - VK3HZ

It's been a very good summer so far with lots of extended openings and many records being reset. Sporadic E openings on 2 m commenced in earnest around the middle of December and have continued to at least mid-January, livening up the Summer VHF/UHF Field Day in the process. On the tropo side, things have been almost as active, with openings across the Bight between VK6 and VK3, 5 and 7 and several between ZL and VK4, 2 and 3.

On the evening of November 23rd, weather conditions were ideal for an opening across the Bight. At 1126Z, Ian VK3AXH in Ballarat worked Bob VK6BE in Albany. At the eastern end, the opening extended well into Gippsland with Phil VK5AKK in Adelaide working Ralph VK3WRE in Traralgon on 70 cm. Peter VK3TPR worked Karl VK7HDX on 2 m with 59+ reports. Peter VK3KAI in Churchill then worked Bob VK6BE on 2 m.

The following morning, conditions between Adelaide and northern Tasmania were still excellent. Peter VK5ZLX worked Paul VK7BBW with S9+ signals and reported that the VK7RAE beacon was extremely strong. Mike VK3AAK reported hearing the VK6RST 70 cm beacon near Albany, and also worked VK5ZLX on 23 cm. The VK6s finally arose and VK6JR worked VK5NY and VK3AAK. VK6BE worked inland to Trevor VK3VG in central Victoria. VK7BBW and VK7HDX reported hearing the 2 m VK6RST beacon weakly. VK3AXH worked VK6JR. Jim VK3II reported hearing the Perth 2 m beacon and then worked VK6AO. That evening, there were still some good conditions between Adelaide and Perth, but they faded away as the night fell.

Unfortunately, I was away for most of December during the meatiest part of the Es activity, but Ron VK4KDD made a good summary of the happenings:

On 18th December, finally the Es have started on 2 m.

It was 9.35 am local time in Brisbane when I called CQ on 144.1, having the 6 m rig on as well. I heard VK7CEJ coming back to my call. I called on 2 m, he replied on 6 m. I called again on 2 m, but now like this: "CQ 2 metres, CQ 2 metres, this is VK4KDD". Bingo, this time VK7CEJ got it and the sound came out of my 2 m speaker. Signals came up from S3 to S9 when QSO was complete.

From then on things started to move quicker and one station after another made it into the log. Very short contacts where made, just time for callsign and report before they disappeared into the noise.

VK3 started to come in – VK3WRE, VK3PY, VK3UHF.

Back to VK7 – VK7FWAY, VK7MO.

Then to VK5 (this opening would last for more than 2 hours) - VK5ZK, VK5BC, VK5BZK, VK5NY, VK5ACY, VK5EME, VK5DK, VK5DL, VK5UK.

Finally another VK7 made it into the log – VK7XGW and VK7CEJ heard.

December 19th was pretty much a replay of the previous day, but with lots of excitement in other parts of the country. First openings from North VK4 to VK3 and VK7. Than the Es came down along the VK4 coast, from Rocky, McKay to Hervey Bay finally to Brisbane. VK3 and VK5 and VK7s were worked, pretty much the same stations as yesterday with a few new ones around. A notable contact - VK7MO to VK4BKP at 2429.6 km.

On the VK Logger, I noted that in the south of the country, 2 m had opened between VK5 and VK6 on ES. VK6WG worked VK5NY, VK5EME and possibly more. Was it possible for a VK4 to VK6 contact via double hop Es? I started calling towards VK6.

VK2DAG, who was also on the Logger, followed the plan and also called, his situation made difficult by heavy Ch 5A QRM. Then VK2DAG reported voices on 144.130. At 0332Z, he worked Wal VK6WG – a distance of 3146 km and new VK2 record. He even had time to exchange QTH info and Merry Xmas with Wal. However, his record was not to stand for long.

Steve VK2ZT who was following the Logger from work, thought it might be a good idea to head home for a break. At 0335Z, he worked VK6BE – a distance of 3207 km, resetting the VK2 record once again. (Later update – Bob VK6BE was not sure of Steve's callsign and so he may not claim the VK6 record for that contact).

But the excitement was not over. VK6HK in Perth appeared on the Logger, while VK1ZQR and VK1BG commenced calling to the west on 144.1. At 0442Z, VK6HK reported that he heard a "BG" on 100 signing with a whistled "K". At 0501Z, VK1BG reported that he got clear copy of the VK6HK callsign. At 0514Z, VK6BE worked VK2ADB who lives very close to the VK1 border. Unfortunately, nothing further was heard, so no VK1 to VK6 QSO was achieved.

The following day – December 20th

Yarra Valley Amateur Radio Group Inc.
C/o P.O. Box 346, Healesville, Vic, 3777

Sunday 24th February, 2008
10am to 2pm
Healesville Memorial Hall
Maroondah Highway, Healesville

For further information:
Steve VK3TSR
0418 103 487

–was again lively. The band opened from VK5 to coastal VK2. VK5NY reported strong VK2s. VK5EME, VK5DL and others worked Ross 2DVZ. VK5DL reported VK2AH 55 (829 km), which might not have been Es. ZL looked promising, but did not happen.

December 21st and yet another day of Es. 6 m was strong to ZL, and NZ FM stations started to appear. At 0015Z, ZL1AVZ was worked by VK2ZT and VK2DVZ via Es. In VK4, the MUF did not peak high enough. Otherwise, a relatively quiet day.

December 22nd and more Es from VK5 to VK2 and VK1. That was the 5th day in a row with Es. VK1VP worked VK5NY and VK5BC. VK5NY also worked VK2BHO and was heard by VK2DAG and VK2ZT, but gone before a contact was made.

December 23rd was a difficult day for Es on 2 m. The MUF went up and down several times during the day, but just a little short for Es on 2 m. The evening had already started and then there was a report about 500 km short skip on 6 m in VK2. At 0920Z, VK4BG worked VK7JG.

December 29th brought a day of records for ZL and I think the best Es we have had so far. The 2 m band was open from early morning to late evening from coastal VK2 to mid VK4 to far north VK4 with openings to VK5.

ZL was open to far north Queensland. At 0035Z, ZL1IU worked VK4FNQ – a distance of 3171 km. VK4DMC worked ZL1CN for a new ZL record of 3549 km.

My best DX for the day - walking in the street in front of my house as pedestrian mobile with the FT817, 5 W and 1/4 wave telescopic vertical. Worked VK4FNQ in Charters Towers (1050 km) receiving a 58 report.

Thanks to Ron VK4KDD for that very comprehensive report.

Further to the new ZL to VK record, Dale VK4DMC in Atherton sent the following:

During the recent 2 metre openings, I worked ZL1CN located in Wellsford, NZ. Murray ZL1CN contacted me a few days later and said that the contact was a NZ VHF record and also the VK/ZL record distance worked (3549 km).

Conditions on the day were excellent and I owe a big thank-you to John VK4FNQ who rang me to let me know that the band was open to ZL and Southern VK areas.

Station details are: IC-7000 + 200 W linear into an 11-el Yagi at 8 m above ground.

Continuing on, December 30th brought a Tropo opening across to ZL. David ZL1BT was hearing Channel 5A at increasing strength. At 2130Z, he worked Steve VK2ZT and later VK2TK and VK2DVZ on 2 m. Meanwhile, Andrew VK1DA who was holidaying near Batemans Bay, had casually called CQ to the east, unaware of any opening. Imagine his surprise when Nick ZL1IU responded to his call, sounding like a local. Other contacts were ZL1SWW to VK2DVZ (5/5) and ZL1AVO to VK2ZT.

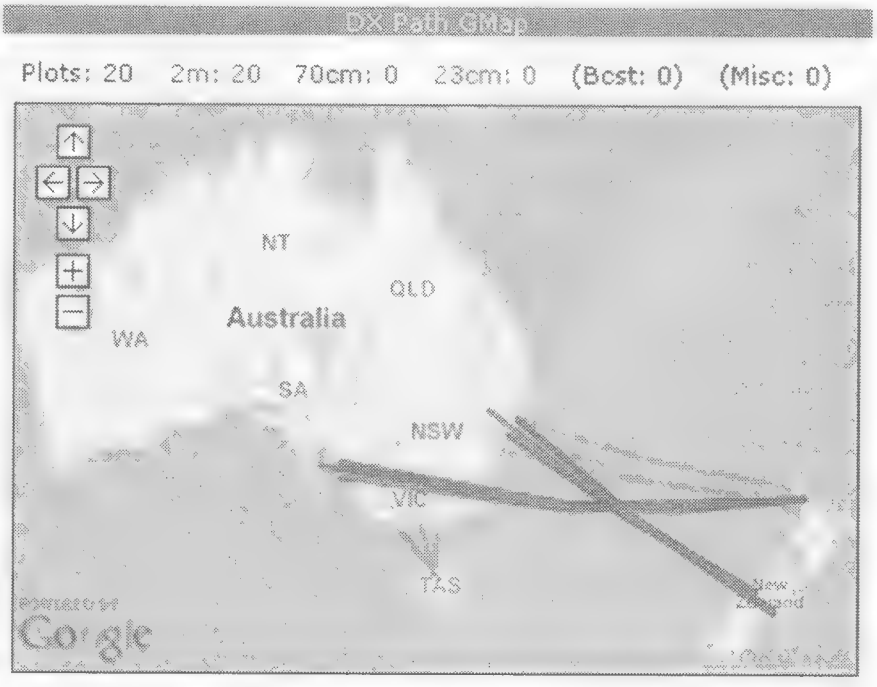
On January 2nd, there was some action across the Bight to VK6. The Albany 2 m and 70 cm beacons were audible in Melbourne from about 2000Z. At 2250Z, Bob VK6BE worked across to Mark VK5EME and Jim VK3II on 2 m. At 0030, Mark worked Wal VK6WG on 2 m and 70 cm. At 0057, Andrew VK3KAQ worked VK6WG on 70 cm. That evening, the enhancement was still present and at 1220Z, David VK3QM worked VK6WG on 2 m.

The following day, the band was still open across the Bight, and conditions intensified as the day wore on. At about 0100Z, VK6WG worked VK5BC/P and VK5DK on 70 cm and VK5AKK on 23 cm. By 0400Z, Wal was so strong in Adelaide on 2 m that he was heard off the back of the beam by VK5EME. With beam facing in the correct direction, VK5EME worked VK6WG on 70 cm with S9++ reports. That evening, signals were still strong. At 1000Z, VK5DL worked VK6BE on 2 m and VK6WG on 70 cm. At 1100Z, VK5NY worked VK6BE on 2 m (5/9) and VK6WG on 70 cm. VK5ZK also worked VK6WG on 70 cm. VK5RU reported still hearing VK6WG on 23 cm at 1200Z.

Meanwhile, at around 0330Z, there was a brief Es opening from VK4 to VK3 and VK7. VK4KDD worked VK7CEJ and VK4WS worked VK3ZYC, VK3XPD and VK3AFW.

January 8th saw another opening across to ZL, this time to the south island. Bob ZL3TY in Greymouth was hearing Ch 5A in Newcastle and pagers. At around 0200Z, he worked VK2ZT (5/9) and VK2AH (3/1) on 2 m. At 0420Z, he worked VK2DVZ (5/5), VK2KOL (5/3) and VK2ZT again, still at 5/9. At 0530Z, he worked VK2FZ and VK2ZCV (5/4) before the opening faded out.

January 9th dawned promisingly with early reports from ZL of VK2 FM broadcast stations being heard via Es. Tropo conditions across VK3 were also very good, with Terry VK3ATS in Mildura reporting hearing the VK7RAE 2 m beacon in northern Tasmania. He



The SPOT map from the VK Logger.

then worked VK7HDX (917 km). At 2300Z, the Es then opened strongly between many stations in Brisbane and Adelaide. Phil VK5AKK reported working VK4WS, VK4KK, VK4XRA, VK4ASB, VK4OE, VK4ARN, VK4ARS and VK2ADY in a little over an hour. Brian VK5BC/P worked VK4s WS, ARN, XRA, OE, APG, ARS, KK, JMC, KR and VK2s ZT, ADY. Meanwhile, ZL had opened strongly to VK2 with ZL1BT reporting 2 m contacts with VK2ZT (5/8) then later VK2DVZ (5/9+20) and VK2DAG (5/9+40). VK2ZT also reported hearing VK5BC. Ross VK2DVZ reported that ZL signals seemed stronger when he was beaming at Adelaide. Brian VK5BC/P at Corny Point takes up the story:

A little after 0130Z, out of the noise on 2 m comes David ZL1BT calling CQ. David is 5/9 and an easy contact at a distance of approx 3402 km. Several other VK5s including VK5AKK, UK, GF (on a vertical!), DL and EME work him. At times, at this QTH, he peaked an unbelievable 20 over S9 and at one stage went QRP (2.5 W) and was still 5/1. In between the mayhem, VK2s were popping in and out and I worked VK2ZT and VK2DVZ. David ZL1BT was a good signal for about 30 minutes.

Approximately 1 hour later the band came to life again with Steve ZL1TWR in Katikati calling CQ at 5/6. Again a good contact was had at a distance of approx 3482 km (I think a VK5-ZL record). Following this contact I worked VK2ARA and VK2KOL and VK1BG.

There has been some discussion as to the mode of propagation from VK5 to ZL. A VK2 station reported hearing both sides of the VK5/ZL contacts. ZL1BT reported that, at one stage, VK2DVZ was S9+20 when pointing Adelaide, but only S5 pointing ZL. There is no doubt that there was Tropo enhancement between VK2 and ZL. However, given the strength of some signals, there was also probably Es from VK2 to ZL. From VK5 to VK2, it was Es. The SPOT map from the VK Logger shows an interesting pattern.

However, the day was not yet over – we have only got to lunchtime. The Tropo enhancement starting moving south and ZL3s started appearing in VK2. At 0210Z, Bob ZL3TY in Greymouth reported working VK2ZQX, VK2ADY (Tamworth) and VK2DVZ on 2 m. VK2DVZ also worked ZL3AAU, ZL3MH, ZL3NW and ZL3OC. At 0310Z, Rex VK7MO in Hobart worked ZL1BT (5/5) – 2440 km. At 0549Z, ZL3TY reported hearing the VK3RGI 2 m beacon in Gippsland. At 0600Z, he worked VK3HZ in Melbourne on JT65a digital (-10). No voice contact was made although signals peaked strongly during the digital contact. ZL3TY then worked VK3VHF and VK3EK, both in Gippsland. Bob's CW was audible in Melbourne for nearly half an hour. By 0630Z, the opening had gone.

10th January – the tropo opening from VK to ZL was still present, but initially much weaker. Contacts were generally fairly marginal but widespread, between stations in VK2 and VK4 to ZL1, 2 and 3. However, at 0530, Nick ZL1IU was heard very strongly by Rex VK7MO, while attempting a digital-mode contact. They made contact on SSB with 5/9+ reports. Rex reported that Nick's signal was at S9 levels for almost 3 hours. Later that day, there was again a strong Es opening between VK4 and VK3, 5 and 7. Many stations at each end enjoyed some very loud signals.

Summer VHF/UHF Field Day

The Summer VHF/UHF Field Day over the weekend of 11/12 January has just happened, and it was good to see strong participation from stations both in the field and at home. It was good to hear people moving quickly away from the 150 calling frequency, leaving it free for others. Several distant, single-operator stations (VK3BJM/2 and VK1DA/1) nominated liaison frequencies away from 150 where they would call and the strategy seemed to work for them with many more contacts logged than on the Spring Field Day. On Saturday afternoon, a sporadic-E opening on 2 m added to the action, with stations working from VK1, 2, 3 and 5 into VK4.

Andrew VK1DA had an interesting time on Mt Ginini:

I would like to thank all the other field and home stations for participating in the weekend's operations, even if the field day contest was at times merely a distraction from the 2 m DX. My total score was 197 - roughly double my previous single operator score.

The contest opened for me when my mobile rig monitoring 2 m heard Ed VK1VP working a VK4 while I was still setting up the antennas just after midday. After putting up the 2 m and 70 cm beams, starting the alternator and setting up the IC-910, I joined in for the first 20 contacts, 6 of whom were VK4s.

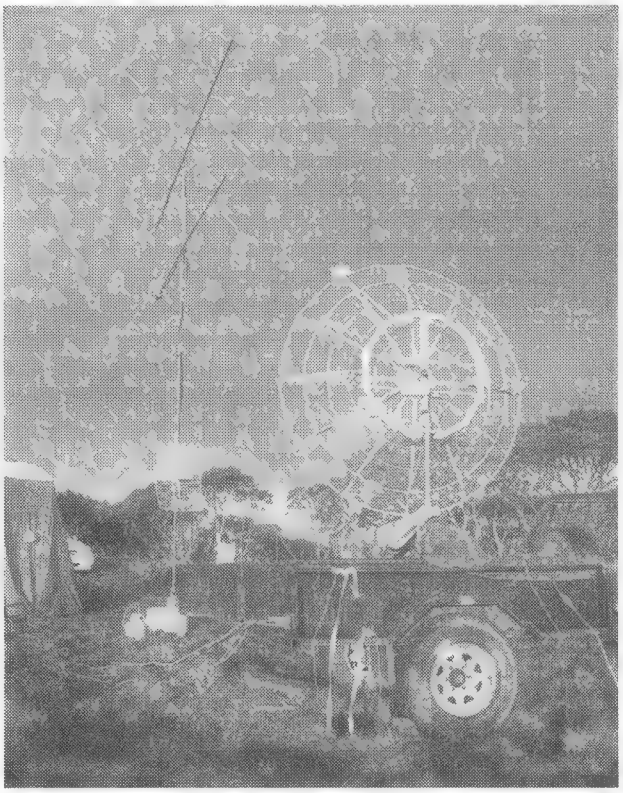
(While working the VK4s in this period, a couple of tough looking characters turned up in their 4WDs, having fearlessly braved the rough road to reach this distant point for their day's expedition. They asked "where is that bloke coming in from" and shrugged when I named a Queensland location. I told them this was on 144 MHz but they weren't impressed. You can't please everyone all the time.)

My log shows a gap from 0325 till 0512, which was the period when I put up the remaining antennas and the tent just in time for the rain to start, followed by some rather close thunder with nearby lightning strikes. This situation worsened to the point that I sealed up the tent, leaving nothing connected to anything, got into the car and drove down the hill 200 m to get away from what felt to me like a precarious situation. I stayed away until the strikes were occurring on more distant hills and didn't seem to be so near to me. Even so it took a while for me to believe it was safe to reconnect the radios, but in the meantime I assembled the other gear, moved other stuff into the tent and generally finished setting up.

The weather stayed mild and the sky was fairly clear at midnight when I stopped for the night, disconnected all antennas and the power cable, turned off the power and lights to get some sleep. At 2 am, I realised the lightning from the west was lighting up the top of the tent and I studied it with some interest through the side window. At 2:30 I decided that maybe the car was a better place to be. The storm arrived around 2:45 and put on quite a big display with the nearest strike apparently being about 3 seconds away. The storm passed over or around Ginini and the area to the east was well lit for a while. Finally went back into the tent around 4:30 and at 5:30 decided to get up and start the day's operations. Filled the tank and it lasted over 6 hours, only to run out when making the final contact of the day with Barry VK3BJM, after the field contest ended.

My radio impressions:

- *using a smaller 2 m beam (8 el) didn't seem to make any difference to contacts made*
- *I think my plan to use 180 as a liaison frequency did work well.*
- *on 1296 I had a rather small Jaybeam 12+12 element slot Yagi and expected to work only the locals - but was delighted to make several contacts with Adrian VK2FZ in Sydney and Robbie VK3EK in Bairnsdale. I did hear Barry VK3BJM's keyer sending dits but given the power differential and the weak signals we didn't attempt a two way contact at the time.*
- *made good contacts with VK3BJM/2 near Balranald on 2 m and 70 cm - skeds assisted by microwave communications (mobile phones)*
- *had a problem with my 2 m rig (IC-271H) and fortunately I had taken a backup rig. It's a long drive (72 km, about 80 minutes each way) to go home to get spares from this location.*
- *use of calling frequencies for contacts did not seem to be as much of a problem, but that may be because I didn't spend much time on the calling frequency. I did hear some people making contacts and complaining about QRM from people calling CQ.*



The VK1DA Field Day Setup (Note the Dark Clouds)

I would support doing away with calling frequencies for contests. It's a contest. Let people work out for themselves what the big knob is for if they can't hear anyone. The rules could simply remind people to observe the band plan and to avoid established DX calling frequencies for contest operation.

Beacons

From Mark VK5AVQ:

Good news - the VK5VF Adelaide beacons have received a great Christmas present - a new home not far from the previous site. At this stage there are still formalities, but we are confident enough to announce that it's looking good.

The short-term intent is to get 2 m and 70 cm up temporarily for the "DX season", with a more permanent mast to be installed over the longer term.

A late note – the beacons were heard on 15 January.

Please send any Weak Signal reports to David VK3HZ at vk3hz@wia.org.au.

Digital DX Modes

Rex Moncur – VK7MO

This year, the British Astronomer, Alastair McBeath, forecast a "great year' for the Geminids meteor shower with a peak at 1645 UTC on 14 December. This meant a number of hardy souls got up at 3.00 am (and for Queensland this was 2:00 am) to try for special meteor scatter contacts on two metres. A number of contacts were made from VK1, 3 and 7 to the South Island of New Zealand with the longest being from Rhett VK3VHF to Bob ZL3TY over 2074 km. The furthest ping copied was from Wayne VK4WS to ZL3TY at 2322 km. Overall it is estimated that the Geminids produced about 5 times as many pings as normal background.

Gavin VK3HY was one of the participants: *I operated FSK441 on 144.230 MHz from 05:30 local time on Saturday morning and was greeted on the VK/ZL logger by Wayne VK4WS with 'Good afternoon Gavin' so I'm guessing he and others may have started a few hours earlier. There was quite a bit of activity with many loud pings and numerous burns. It was certainly a well above average morning. I completed FSK441 contacts with VK4EME, VK4WS, VK4JMC, VK2ZT, VK2KOL, VK1WJ, VK2AWD and VK2FZ. I had not worked VK2KOL or VK2ZT previously so that was a bonus.*

I didn't participate in the earlier attempt to work ZL because there is a little hill, not far from where I live, called Mt Dandenong, in the way. I have worked ZL on 2 metres tropo but MS seemed a little optomistic.

Sunday morning was back to normal - the meteors shower seemed to have moved on.

With lots of tropo and sporadic E openings on two metres over summer, a number of stations have made JT65 contacts prior to the openings being good enough for SSB. VK3VHF and David VK3HZ to ZL3TY. Steve VK2ZT, Colin VK2KOL and Rex VK7MO to ZL1BT. The practice across the Tasman is for ZL to transmit first on 144.225 using JT65a.

VK3VHF has his 1296 MHz station operational and made his first contact to southern VK7 with VK7MO using JT65.

Welcome back Doug VK3UM, who surprised many with an appearance during a FSK441 meteor scatter session – such that one VK4 rang Doug to warn him a pirate was using his callsign.

Please send any Digital DX Modes reports to Rex VK7MO at rmoncur@bigpond.net.au.

The Magic Band – 6 m DX

Brian Cleland – VK5BC

After a slow start, the summer sporadic E season got into full swing from Dec 13th. Although there were some days where the band opened all day when most states and ZL could be worked, the season did not seem to reach the heights of the 2006/2007 season with far less openings to VK6 and ZL. The season was made more interesting with several Pacific stations being active and worked from most states of VK and ZL.

From VK6, Graham VK6RO reports a reasonably quiet season with good openings on the 18/19th December to VK2, 3 and ZL and on the 29th December to far north Queensland when VK4AQ, VK4FNQ, VK4DB and VK4BEG were worked.

Paul A35RK operating from Lifuka Island, OC-169, grid locator AH20te (part of the Tonga group of Islands) was much sought after from both VK and ZL and was first worked by Kerry ZL2TPY on 28/11/07 on SSB and then in VK by Steve VK3OT, John VK4FNQ and Kevin VK4BKP on 3/12/07 on CW. The most distant station worked by Paul was John VK6JJ on the 31st December, a distance of 6970 km. Paul regularly monitored the band and openings occurring on 15 days from late November to early January. Table 1 is a summary of Paul's log up to 2nd January 2008.

Paul in his shack.

Paul was running 100 W from a Yaesu FT-857 and using a 4-el Yagi on a 3 m boom. It just shows what can be achieved with multiple-hop sporadic E when there is a station out there monitoring the band. Thanks Paul for your great efforts and time - you were a new country on 6 m for the large percentage of those who managed to work you.

Another station of interest from the Pacific area was Tony 3D2AG who was operating portable from Rotuma (north of Fiji), grid locator RH87mm. Tony worked Phil VK2FHN on the 23rd December on CW and then several VK/ZL stations on the 30/31st December on CW and SSB. This included VK1, VK2, VK3 and VK4s (from Cairns to Brisbane) and Garry VK5ZK, Roger VK5NY and Brian VK5BC/p (Corny Point).

Doug VK9ZLH from Lord Howe Island also made a couple of appearances, notably on the 17th November when he was very strong into VK5 working several stations. Richard VK5UK reports Doug being 20 over S9. Doug also worked into VK3 and VK5 on the 27th December.

Keep monitoring the beacons and call channels as many openings occur well into March.

Please send any 6 m information to Brian VK5BC at bcleland@picknowl.com.au.

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AREA	CONTACTS	CALLSIGNS WORKED	
VK1	1	1	VK1VP (SSB)
VK2	63	36	16 CW, 47 SSB
VK3	27	16	10 CW, 17 SSB
VK4	46	27	18 CW, 28 SSB
VK5	21	10	7 CW, 14 SSB
VK6	1	1	VK6JJ (CW)
VK7	1	1	VK7JG (CW)
VK8	1	1	VK8MS (SSB)
VK9	1	1	VK9ZLH (SSB)
TOTAL VK	161	94	53 CW, 108 SSB
ZL1	5	4	1 CW, 4 SSB
ZL2	8	4	1 CW, 7 SSB
ZL3	21	10	12 CW, 9 SSB
ZL4	2	2	1 CW, 1 SSB
TOTAL ZL	36	20	15 CW, 23 SSB
FK8	1	1	FK1TK (SSB)
3D2	3	1	3D2AG/p (1 CW, 2 SSB)

Table 1

John Moyle Memorial Field Contest

15 – 16 March

(see page 52)

Hamads *classifieds* FREE

FOR SALE NSW

• YAESU FT-7100M dual band VHF/UHF 50/35W, Rx 108-999. Remote head, 262 memory, CTSS/DCS. Hardly used,looks as new, in original box $450. VK2AYC. 02 9583 2056

• OZI-POLE portable dipole kits plus 80 m add on coils will be available at the Radio Expo in Coffs Harbour and also at Wyong 2008. Look for the Radio Supply Pty Ltd stand at Wyong. A build-it-yourself project that you can use with pride from the M.N.C.A.R.G. Inc. P.O.Box 505 Bellingen NSW 2454. Visit http://www.mncarg.org/ or email mncarg@yahoo.com.au. Price $99 + post.

WANTED NSW

• Circuit diagram of ICOM dual band transceiver IC-3200A and IC-706. Laurie. Email jordans@speedlink.com.au or VK2ALV. QTHR

• WW 2 122 Hand Book or copy of same. Contact Brian mndleech@bigpond.com.

• For YAESU FT-101ZD: 1x Radio frequency Drive Gain VR3b 5k(A), 1x microphone Gain VR3a 5K(B). Contact John ZL3TR or Stephen: 0419 494 417, stephenhaynes.gc@bigpond.com

• Signal Generator. Minimum coverage on fundamental 120 kHz to 150 MHz. Must be in good working order. John Bennett VK2SIG, QTHR. email: macben2@bigpond.com

FOR SALE VIC

• TELSTRA V580a 5.8 GHz Digital Answering Machine with Cordless Handset, brand new - still in box - $90 ONO. Tom Davie VK3BBZ QTHR Armadale 3144. 0418 323 434 or tomdavie@bigpond.net.au

WANTED VIC

• WEATHER STATION, hardwired not wireless, working order with manuals and software. John VK3YFG ph 03 9740 9172.

• I've never tried 6 m. I don't have gear for it. In desperation I want to give it a go. Therefore I am interested to buy a TRX that includes 6 m. all modes. Vintage is no worry. Nothing fancy or expensive. Alan VK3KZ. QTHR. Phone 03 9439 5825

• ICOM IC-RM2 Remote control programmer/scanner for IC-701, (also matches IC-221 & IC-245). Bill VK3BCW. QTHR. Phone 03 98537830 or e-mail; willwill@bigpond.net.au

FOR SALE QLD

• YAESU FT-767 GX, KENWOOD TS-670 txcvr, Coax Relay. KINGS VHF-UHF connectors and hardline bits, bulkhead connector 8122 and 4CX1500, a poor handbook and mike. Paul VK4DJ tel 07 4775 7998

• Five HF fibre glass untuned helical whips. Dick Pietrala VK4OP ndpiet@bigpond.net.au

• CODAN Mobile H.F. outback radiophone, Type 8528, S/No. B5110 with amateur option (3.5 to 29.7 MHz) and RFDS emergency call. Matching CODAN automatic tuning whip antenna Type 8558, S/No.D3785, remote control head, cables, microphone, speaker and handbook. All for $950. Ken Riding, VK4CKR, QTHR, 07 5529 1646, 0412 615 317, Email kwr@optusnet.com.au

• TET-EMTRON HF Yagi antenna TE-43 4-element triband yagi, 9 m long elements. Cost $1100, Sell for $500. KENPRO KR-400 Rotator, comes with wiring and azimuth in good condition $200. Will sell antenna, rotator and short mast for $600. ASTRON RS 35M Power Supply 25 Amp continuous, 35 amp surge dim. 5 X 11 X 11" weight 27 lbs. Current and voltage meters, hardly used, perfect condition, $220. UNIDEN HR2510 10 metre amateur radio transceiver. 26 MHz - 29.999 MHz coverage, AM, FM, USB, LSB chip-switched. Comes with manual, microphone, bracket and power cord, $300. Contact: Jonathan Dimond (ex-VK4DJD) Email: jonathan@jonathandimond.com, phone: 03 9016 3506

WANTED QLD

• CW FILTER YAESU XF-455M601-01 as used in FT-757 & FT-650 (possibly others). Ray VK4BLK QTHR, email vk4blk@tadaust.org.au

FOR SALE SA

• VK5JST Antenna Analyser kits. (see AR article May 2006) Build yourself an extremely useful item for your shack, and improve your HF antenna efficiency. For more details see www.scarc.org.au; contact SCARC PO Box 333 Morphett Vale SA 5162, or email: kits@scarc.org.au

FOR SALE WA

• Vintage restored 1950/1960 British 'PANDA CUB' transmitter (35 – 40 W), which covers 160 to 10 m AM/CW (807 PA modulated by a pair of 6L6s), paired up with a restored BC-348R receiver (from a Flying Fortress or a Liberator bomber) and a relay-controlled TR system. Get yourself a post-World War II ham radio station! There are manuals for both radios and spare valves for the Panda Cub, plus a lovely-looking crystal microphone on a stand. $650 for the lot. Contact Steve, VK6VZ by email at vk6vz@arach.net.au

• YAESU FT-1000D classic 200 W HF transceiver – as used by many of the world's top DXers. Read the reviews of this radio at: http://www.eham.net/reviews/detail/210. All modes on 1.8 – 28 MHz amateur bands, plus general coverage receive and sub-receiver. Stacked with optional accessories over the basic FT-1000 – high stability VCO, 500 Hz CW filter in the sub receiver, BPF-1 bandpass filter and 2.0 kHz, 500 Hz and 250 Hz third IF crystal filters in the main receiver, giving dual crystal filtering at 2.4 kHz, 2.0 kHz, 500 Hz and 250 Hz bandwidths. The radio is also fitted with the International Radio 'Tuning Upgrader' which provides variable-speed tuning, depending on how fast you tune the radio. The radio is a late model (serial number 5M4490069) and comes with the latest firmware (version 6.0). It has the famous W8JI noise blanker and key click modifications, which have been installed by a professional RF engineer. Complete with MH-1 microphone, user manual and technical service manual. Excellent condition. Photos are available on request. $2,300. Steve Ireland, VK6VZ email: vk6vz@arach.net.au

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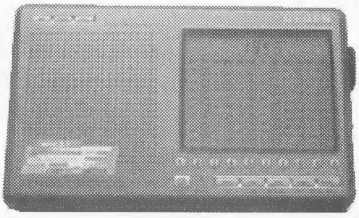

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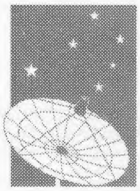

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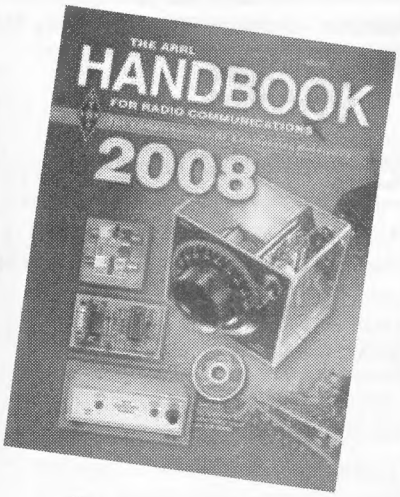

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Broadcast details

VK1	VK1WIA:	Sunday 1100 local, on 7.128, 146.950 and 438.050 MHz. Email newsletter, on request, via president@vk1.ampr.org
VK2	VK2WI:	Sunday 1000 and 1930 local, on 1.845, 3.595, 7.146, 10.125, 14.170, 28.320, 52.525, 145.600, 147.000, 438.525 and 1273.500 MHz. Plus regional relays on 5.425 MHz USB (morning). VK1WIA news is included in the morning.
VK3	VK1WIA:	Sunday 1030 and 2000 local, on 3.615, 7.158, 10.130, 146.700, 147.250 and 439.800 MHz.
VK4	VK1WIA:	Sunday 0900 local via HF and major VHF/UHF repeaters.
VK5	VK5WI:	Sunday 0900 local, on 1.843, 3.550, 7.140, 28.470, 53.100 AM, 146.900 (SE), 146.925 (CN), 147.000 and 439.975
VK6	VK6WIA:	Sunday 0930 local, on 1.865, 3.564, 7.075, 10.125, 14.116, 14.175, 21.185, 29.120, 50.150, 146.700 and 438.525 MHz. Country relays on 3.582 MHz and major repeaters. Repeated Sunday, 1900 local, on 1.865, 3.564, 146.700 and 438.525 MHz. Country relays on major repeaters. Also in 'Realaudio' format from the VK6WIA website.
VK7	VK7WIA:	Sunday 0900 local, on 1.840 AM and 3.570 MHz and on major repeaters. VK7 regional news follows at 0930 local, on 7.090 and 14.130 MHZ, and on major repeaters.
VK8		Sunday 0900 local, on 3.555, 7.050, 10.130 and 146.900 MHz.

Note that many clubs broadcast the WIA News via local VHF and UHF repeaters. Check the News section of the WIA website.

Platinum for VK2FMYL

Norma O'Hare VK2YL.

Frank M0AEU presenting Michelle VK2FMYL with her Platinum Scouting 100 plaque on the steps of Sydney Town Hall on 29 December, 2007

Michelle VK2FMYL was personally presented with her ***Platinum Scouting 100 Award*** on the steps of Sydney Town Hall by Frank M0AEU recently. Michelle was the first VK to receive this level of the award, as well as the youngest in the world.

To gain the platinum award, Michelle had to gain 250 points by contacting amateur radio Girl Guide and Scout stations.

The award was organized by Frank M0AEU to celebrate 100 years of world Scouting and was conducted throughout 2007. Frank decided to deliver Michelle's award personally as he was travelling to Australia to attend an international Rover Moot.

Michelle is a leader with the Baulkham Hills Explorer Guides and also gained a Bronze certificate for her Guide unit by conducting a radio sleep over for the girls earlier this year. They were the first Girl Guide unit to gain a Scouting 100 award in the world.

Further information about the Scouting 100 award can be found on the internet at http://www.scouting100award.org

Michelle VK2FMYL and the Baulkham Hills Explorer Guides with their Bronze Scouting 100 certificate, at their AGM on 26 April 2007

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